

Kurt W. Anderson
Monaco Coach Corporation
P.O. Box 465
Wakarusa, IN 46573

Re: Significant Source Modification No:
SSM 039-11468-00182

Dear Mr. Anderson:

Monaco Coach Corporation applied for a Part 70 operating permit on December 12, 1996 for a towable and motorized recreational vehicle manufacturing source. An application to modify the source was received on November 15, 1999. Pursuant to 326 IAC 2-7-10.5 the following emission units are approved for construction at the source:

Plant 4, Service Paint

- (a) Two (2) paint bays known as SV-37 and SV-38, equipped with dry filters for air pollution control. Total capacity of Plant 4 will increase from 0.5 to 1.0 recreational vehicles per hour.

Plant 5, Parts Painting

- (b) Three (3) surface coating booths, known as SV-5, SV-6 and SV-9, equipped with dry filters for air pollution control, will be converted to fiberglass production areas. Production will remain at the current maximum capacity of parts to produce 4.5 recreational vehicles per hour.
- (c) Two (2) surface coating booths, known as SV-10 and SV-11, equipped with dry filters for air pollution control, will be converted to small parts painting. Capacity: parts to produce 4.0 recreational vehicle parts per hour.

Plant 8, Customer Service Facility

- (d) One (1) customer service facility, with touch-up surface coating and solvent emissions. All emissions are fugitive and will exit the building through general ventilation. Maximum capacity will increase from 0.5 to 2.25 recreational vehicles per hour.

Roadmaster Plant

- (e) Seventy two (72) welding stations and ten (10) cutting tables. Emissions are not controlled. Maximum production capacity will increase from 0.676 to 4.5 chassis per hour.
- (f) Four (4) surface coating booths, known as SV-30, SV-31, SV-32 and SV-33, equipped with dry filters for air pollution control. Maximum production capacity will increase from 0.676 to 4.5 chassis per hour.

Aftermarket Fiberglass Plant

- (g) Two (2) fiberglass production areas known as SV-34 and SV-35, each equipped with dry filters for air pollution control. Total capacity for the facility will be parts to produce 1.0 recreational vehicles per hour.

- (h) One (1) grinding area, known as DC-FG4, with particulate matter controlled by a dry filtered exhaust. Maximum capacity: 1,046 pounds per hour.

The proposed Significant Source Modification approval will be incorporated into the pending Part 70 permit application pursuant to 326 IAC 2-7-10.5(l)(3). If there are no changes to the proposed construction of the emission units, the source may begin operating on the date that IDEM receives an affidavit of construction pursuant to 326 IAC 2-7-10.5(h). If there are any changes to the proposed construction the source can not operate until an Operation Permit Validation Letter is issued.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter please contact Patrick T. Brennan, c/o OAM, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, at 631-691-3395 or in Indiana at 1-800-451-6027 (ext 631-691-3395).

Sincerely,

Paul Dubenetzky, Chief
Permits Branch
Office of Air Management

Attachments
PTB/MES

cc: File - Elkhart County
U.S. EPA, Region V
Elkhart County Health Department
Northern Regional Office
Air Compliance Section Inspector - Greg Wingstrom
Compliance Data Section - Mendy Jones
Administrative and Development - Janet Mobley
Technical Support and Modeling - Michele Boner

PART 70 SIGNIFICANT SOURCE MODIFICATION OFFICE OF AIR MANAGEMENT

**Monaco Coach Corporation
1722 Mishawaka Road
Elkhart, Indiana 46513**

(herein known as the Permittee) is hereby authorized to construct and operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this approval.

This approval is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Source Modification No.: SSM 039-11468-00182	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date:

TABLE OF CONTENTS

A	SOURCE SUMMARY	4
A.1	General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]	
A.2	Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)]	
A.3	Part 70 Permit Applicability [326 IAC 2-7-2]	
B	GENERAL CONSTRUCTION CONDITIONS	6
B.1	Permit No Defense [IC 13]	
B.2	Definitions [326 IAC 2-7-1]	
B.3	Effective Date of the Permit [IC13-15-5-3]	
B.4	Revocation of Permits [326 IAC 2-1.1-9(5)][326 IAC 2-7-10.5(i)]	
B.5	Significant Source Modification [326 IAC 2-7-10.5(h)]	
C	GENERAL OPERATION CONDITIONS	8
C.1	Certification [326 IAC 2-7-4(f)] [326 IAC 2-7-6(1)][326 IAC 2-7-5(3)(C)]	
C.2	Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)]	
C.3	Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]	
C.4	Opacity [326 IAC 5-1]	
C.5	Operation of Equipment [326 IAC 2-7-6(6)]	
C.6	Stack Height [326 IAC 1-7]	
C.7	Performance Testing [326 IAC 3-6][326 IAC 2-1.1-11]	
C.8	Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]	
C.9	Compliance Monitoring Plan - Failure to Take Response Steps	
C.10	Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5]	
C.11	Monitoring Data Availability [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)]	
C.12	General Record Keeping Requirements [326 IAC 2-7-5(3)]	
C.13	General Reporting Requirements [326 IAC 2-7-5(3)(C)]	
D.1	FACILITY OPERATION CONDITIONS: Surface Coating	15
	Emission Limitations and Standards [326 IAC 2-7-5(1)]	
D.1.1	Volatile Organic Compounds (VOC) [326 IAC 8-1-6]	
D.1.2	Hazardous Air Pollutants (HAP) [326 IAC 2-4.1-1]	
D.1.3	Volatile Organic Compounds (VOC) [326 IAC 8-2-9]	
D.1.4	Particulate Matter (PM) [326 IAC 6-3-2(c)]	
D.1.5	Preventive Maintenance Plan [326 IAC 2-7-5(13)]	
	Compliance Determination Requirements [326 IAC 2-1.1-11] [326 IAC 2-7-6(1)]	
D.1.6	Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]	
D.1.7	Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAP)	
D.1.8	VOC and HAPs Emissions	
D.1.9	Particulate Matter (PM)	
	Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]	
D.1.10	Operator Training Program	

	Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]	
	D.1.11 Record Keeping Requirements	
	D.1.12 Reporting Requirements	
D.2	FACILITY OPERATION CONDITIONS: Grinding and Welding	20
	Emission Limitations and Standards [326 IAC 2-7-5(1)]	
	D.2.1 Particulate Matter (PM) [326 IAC 6-3]	
	D.2.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]	
	Compliance Determination Requirements [326 IAC 2-1.1-11] [326 IAC 2-7-6(1)]	
	D.2.3 Testing Requirements [326 IAC 2-7-6(1)] [326 IAC 2-1.1-11]	
	D.2.4 Particulate Matter (PM)	
	Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]	
	D.2.5 Operator Training Program	
D.3	FACILITY OPERATION CONDITIONS: PSD Minor Limit Conditions for the Entire Source	22
	Emission Limitations and Standards [326 IAC 2-7-5(1)]	
	D.3.1 PSD Minor Limit [326 IAC 2-2] [40 CFR 52.21]	
	Compliance Determination Requirements [326 IAC 2-1.1-11] [326 IAC 2-7-6(1)]	
	D.3.2 VOC Emissions	
	Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]	
	D.3.3 Record Keeping Requirements	
	D.3.4 Reporting Requirements	
	Certification	24
	Quarterly Report Forms	25

SECTION A

SOURCE SUMMARY

This approval is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM). The information describing the emission units contained in conditions A.1 through A.2 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this approval pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

The Permittee owns and operates a stationary towable and motorized recreational vehicle manufacturing source.

Responsible Official: Richard E. Bond
Source Address: 1722 Mishawaka Road, Elkhart, Indiana 46513
Mailing Address: P.O. Box 465, Wakarusa, Indiana 46573
Phone Number: 219 - 862 - 7347
SIC Code: 3716, 3792, 7532, 7538 and 3082
County Location: Elkhart
County Status: Attainment for all criteria pollutants
Source Status: Part 70 Permit Program
Minor Source, under PSD Rules;
Major Source, Section 112 of the Clean Air Act

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary towable and motorized recreational vehicle manufacturing source is approved to construct and operate the following emission units and pollution control devices:

Plant 4, Service Paint

- (a) Two (2) paint bays known as SV-37 and SV-38, equipped with dry filters for air pollution control. Total capacity of Plant 4 will increase from 0.5 to 1.0 recreational vehicles per hour.

Plant 5, Parts Painting

- (b) Three (3) surface coating booths, known as SV-5, SV-6 and SV-9, equipped with dry filters for air pollution control, will be converted to fiberglass production areas. Production will remain at the current maximum capacity of parts to produce 4.5 recreational vehicles per hour.
- (c) Two (2) surface coating booths, known as SV-10 and SV-11, equipped with dry filters for air pollution control, will be converted to small parts painting. Capacity: parts to produce 4.0 recreational vehicle parts per hour.

Plant 8, Customer Service Facility

- (d) One (1) customer service facility, with touch-up surface coating and solvent emissions. All emissions are fugitive and will exit the building through general ventilation. Maximum capacity will increase from 0.5 to 2.25 recreational vehicles per hour.

Roadmaster Plant

- (e) Seventy two (72) welding stations and ten (10) cutting tables. Emissions are not controlled. Maximum production capacity will increase from 0.676 to 4.5 chassis per hour.
- (f) Four (4) surface coating booths, known as SV-30, SV-31, SV-32 and SV-33, equipped with dry filters for air pollution control. Maximum production capacity will increase from 0.676 to 4.5 chassis per hour.

Aftermarket Fiberglass Plant

- (g) Two (2) fiberglass production areas known as SV-34 and SV-35, each equipped with dry filters for air pollution control. Total capacity for the facility will be parts to produce 1.0 recreational vehicles per hour.
- (h) One (1) grinding area, known as DC-FG4, with particulate matter controlled by a dry filtered exhaust. Maximum capacity: 1,046 pounds per hour.

A.3 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary towable and motorized recreational vehicle manufacturing source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

- (a) It is a major source, as defined in 326 IAC 2-7-1(22).

SECTION B GENERAL CONSTRUCTION CONDITIONS

B.1 Permit No Defense [IC 13]

This approval to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

B.2 Definitions [326 IAC 2-7-1]

Terms in this approval shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, any applicable definitions found in IC 13-11, 326 IAC 1-2 and 326 IAC 2-7 shall prevail.

B.3 Effective Date of the Permit [IC13-15-5-3]

Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

B.4 Revocation of Permits [326 IAC 2-1.1-9(5)][326 IAC 2-7-10.5(i)]

Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

B.5 Significant Source Modification [326 IAC 2-7-10.5(h)]

This document shall also become the approval to operate pursuant to 326 IAC 2-7-10.5(h) when, prior to start of operation, the following requirements are met:

- (a) The attached affidavit of construction shall be submitted to the Office of Air Management (OAM), Permit Administration & Development Section, verifying that the emission units were constructed as proposed in the application. The emissions units covered in the Significant Source Modification approval may begin operating on the date the affidavit of construction is postmarked or hand delivered to IDEM if constructed as proposed.
- (b) If actual construction of the emissions units differs from the construction proposed in the application, the source may not begin operation until the source modification has been revised pursuant to 326 IAC 2-7-11 or 326 IAC 2-7-12 and an Operation Permit Validation Letter is issued.
- (c) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.
- (d) The Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section and attach it to this document.

However, in the event that the Title V application is being processed at the same time as this application, the following additional procedures shall be followed for obtaining the right to operate:

- (1) If the Title V draft permit has not gone on public notice, then the change/addition covered by the Significant Source Modification will be included in the Title V draft.

- (2) If the Title V permit has gone thru final EPA proposal and would be issued ahead of the Significant Source Modification, the Significant Source Modification will go thru a concurrent 45 day EPA review. Then the Significant Source Modification will be incorporated into the final Title V permit at the time of issuance.
- (3) If the Title V permit has not gone thru final EPA review and would be issued after the Significant Source Modification is issued, then the Modification would be added to the proposed Title V permit, and the Title V permit will issued after EPA review.

SECTION C **GENERAL OPERATION CONDITIONS**

C.1 Certification [326 IAC 2-7-4(f)][326 IAC 2-7-6(1)][326 IAC 2-7-5(3)(C)]

- (a) Where specifically designated by this approval or required by an applicable requirement, any application form, report, or compliance certification submitted under this approval shall contain certification by a responsible official of truth, accuracy, and completeness. This certification, shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, on the attached Certification Form, with each submittal.
- (c) A responsible official is defined at 326 IAC 2-7-1(34).

C.2 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)] [326 IAC 1-6-3]

- (a) If required by specific condition(s) in Section D of this approval, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMP) within ninety (90) days after issuance of this approval, including the following information on each facility:
 - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions;
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If due to circumstances beyond its control, the PMP cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

- (b) The Permittee shall implement the Preventive Maintenance Plans as necessary to ensure that failure to implement the Preventive Maintenance Plan does not cause or contribute to a violation of any limitation on emissions or potential to emit.
- (c) PMP's shall be submitted to IDEM, OAM, upon request and shall be subject to review and approval by IDEM, OAM. IDEM, OAM, may require the Permittee to revise its Preventive Maintenance Plan whenever lack of proper maintenance causes or contributes to any violation.

C.3 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]

- (a) The Permittee must comply with the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this approval.

- (b) Any application requesting an amendment or modification of this approval shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

Any such application should be certified by the "responsible official" as defined by 326 IAC 2-7-1(34) only if a certification is required by the terms of the applicable rule

- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

C.4 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary alternative opacity limitations), opacity shall meet the following, unless otherwise stated in this approval:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period.

C.5 Operation of Equipment [326 IAC 2-7-6(6)]

Except as otherwise provided in this approval, all air pollution control equipment listed in this approval and used to comply with an applicable requirement shall be operated at all times that the emission units vented to the control equipment are in operation.

C.6 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted by using ambient air quality modeling pursuant to 326 IAC 1-7-4.

Testing Requirements [326 IAC 2-7-6(1)]

C.7 Performance Testing [326 IAC 3-6][326 IAC 2-1.1-11]

- (a) Compliance testing on new emission units shall be conducted within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up, if specified in Section D of this approval. All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this approval, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAM.

A test protocol, except as provided elsewhere in this approval, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The Permittee shall submit a notice of the actual test date to the above address so that it is received at least two weeks prior to the test date.

- (b) All test reports must be received by IDEM, OAM, within forty-five (45) days after the completion of the testing. An extension may be granted by the IDEM, OAM, if the source submits to IDEM, OAM, a reasonable written explanation within five (5) days prior to the end of the initial forty-five (45) day period.

The documentation submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]

C.8 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

Compliance with applicable requirements shall be documented as required by this approval. All monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of approval issuance. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.

The notification which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]

C.9 Compliance Monitoring Plan - Failure to Take Response Steps [326 IAC 2-7-5][326 IAC 2-7-6] [326 IAC 1-6]

- (a) The Permittee is required to implement a compliance monitoring plan to ensure that reasonable information is available to evaluate its continuous compliance with applicable requirements. This compliance monitoring plan is comprised of:

- (1) This condition;
- (2) The Compliance Determination Requirements in Section D of this approval;

- (3) The Compliance Monitoring Requirements in Section D of this approval;
- (4) The Record Keeping and Reporting Requirements in Section C (Monitoring Data Availability, General Record Keeping Requirements, and General Reporting Requirements) and in Section D of this approval; and
- (5) A Compliance Response Plan (CRP) for each compliance monitoring condition of this approval. CRP's shall be submitted to IDEM, OAM, upon request and shall be subject to review and approval by IDEM, OAM. The CRP shall be prepared within ninety (90) days after issuance of this approval by the Permittee and maintained on site, and is comprised of:
 - (A) Response steps that will be implemented in the event that compliance related information indicates that a response step is needed pursuant to the requirements of Section D of this approval; and
 - (B) A time schedule for taking such response steps including a schedule for devising additional response steps for situations that may not have been predicted.
- (b) For each compliance monitoring condition of this approval, appropriate response steps shall be taken when indicated by the provisions of that compliance monitoring condition. Failure to perform the actions detailed in the compliance monitoring conditions or failure to take the response steps within the time prescribed in the Compliance Response Plan, shall constitute a violation of the approval unless taking the response steps set forth in the Compliance Response Plan would be unreasonable.
- (c) After investigating the reason for the excursion, the Permittee is excused from taking further response steps for any of the following reasons:
 - (1) The monitoring equipment malfunctioned, giving a false reading. This shall be an excuse from taking further response steps providing that prompt action was taken to correct the monitoring equipment.
 - (2) The Permittee has determined that the compliance monitoring parameters established in the approval conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the approval, and such request has not been denied or;
 - (3) An automatic measurement was taken when the process was not operating; or
 - (4) The process has already returned to operating within "normal" parameters and no response steps are required.
- (d) Records shall be kept of all instances in which the compliance related information was not met and of all response steps taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.

C.10 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5]
[326 IAC 2-7-6]

-
- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this approval exceed the level specified in any condition of this approval, the Permittee shall take appropriate corrective actions. The Permittee shall submit a description of these corrective actions to IDEM, OAM, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize emissions from the affected facility while the corrective actions are being implemented. IDEM, OAM shall notify the Permittee within thirty (30) days, if the corrective actions taken are deficient. The Permittee shall submit a description of additional corrective actions taken to IDEM, OAM within thirty (30) days of receipt of the notice of deficiency. IDEM, OAM reserves the authority to use enforcement activities to resolve noncompliant stack tests.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAM that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAM may extend the retesting deadline. Failure of the second test to demonstrate compliance with the appropriate approval conditions may be grounds for immediate revocation of the approval to operate the affected facility.

The documents submitted pursuant to this condition do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

C.11 Monitoring Data Availability [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)]

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- (a) With the exception of performance tests conducted in accordance with Section C- Performance Testing, all observations, sampling, maintenance procedures, and record keeping, required as a condition of this approval shall be performed at all times the equipment is operating at normal representative conditions.
- (b) As an alternative to the observations, sampling, maintenance procedures, and record keeping of subsection (a) above, when the equipment listed in Section D of this approval is not operating, the Permittee shall either record the fact that the equipment is shut down or perform the observations, sampling, maintenance procedures, and record keeping that would otherwise be required by this approval.
- (c) If the equipment is operating but abnormal conditions prevail, additional observations and sampling should be taken with a record made of the nature of the abnormality.
- (d) If for reasons beyond its control, the operator fails to make required observations, sampling, maintenance procedures, or record keeping, reasons for this must be recorded.
- (e) At its discretion, IDEM may excuse such failure providing adequate justification is documented and such failures do not exceed five percent (5%) of the operating time in any quarter.
- (f) Temporary, unscheduled unavailability of staff qualified to perform the required observations, sampling, maintenance procedures, or record keeping shall be considered a valid reason for failure to perform the requirements stated in (a) above.

C.12 General Record Keeping Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-6]

- (a) Records of all required monitoring data and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location or at an offsite location for a minimum of three (3) years and available upon the request of an IDEM, OAM, representative. They may be stored elsewhere for the remaining two (2) years provided they are made available within thirty (30) days after written request.
- (b) Records of required monitoring information shall include, where applicable:
 - (1) The date, place, and time of sampling or measurements;
 - (2) The dates analyses were performed;
 - (3) The company or entity performing the analyses;
 - (4) The analytic techniques or methods used;
 - (5) The results of such analyses; and
 - (6) The operating conditions existing at the time of sampling or measurement.
- (c) Support information shall include, where applicable:
 - (1) Copies of all reports required by this approval;
 - (2) All original strip chart recordings for continuous monitoring instrumentation;
 - (3) All calibration and maintenance records;
 - (4) Records of preventive maintenance shall be sufficient to demonstrate that failure to implement the Preventive Maintenance Plan did not cause or contribute to a violation of any limitation on emissions or potential to emit. To be relied upon subsequent to any such violation, these records may include, but are not limited to: work orders, parts inventories, and operator's standard operating procedures. Records of response steps taken shall indicate whether the response steps were performed in accordance with the Compliance Response Plan required by Section C - Compliance Monitoring Plan - Failure to take Response Steps, of this approval, and whether a deviation from an approval condition was reported. All records shall briefly describe what maintenance and response steps were taken and indicate who performed the tasks.
- (d) All record keeping requirements not already legally required shall be implemented within ninety (90) days of approval issuance.

C.13 General Reporting Requirements [326 IAC 2-7-5(3)(C)]

- (a) The reports required by conditions in Section D of this approval shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

- (b) Unless otherwise specified in this approval, any notice, report, or other submission required by this approval shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM, on or before the date it is due.
- (c) Unless otherwise specified in this approval, any quarterly report shall be submitted within thirty (30) days of the end of the reporting period. The report does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (d) The first report shall cover the period commencing on the date of issuance of this approval and ending on the last day of the reporting period.

SECTION D.1

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

Plant 4, Service Paint

- (a) Two (2) paint bays known as SV-37 and SV-38, equipped with dry filters for air pollution control. Total capacity of Plant 4 will increase from 0.5 to 1.0 recreational vehicles per hour.

Plant 5, Parts Painting

- (b) Three (3) surface coating booths, known as SV-5, SV-6 and SV-9, equipped with dry filters for air pollution control, will be converted to fiberglass production areas. Production will remain at the current maximum capacity of parts to produce 4.5 recreational vehicles per hour.
- (c) Two (2) surface coating booths, known as SV-10 and SV-11, equipped with dry filters for air pollution control, will be converted to small parts painting. Capacity: parts to produce 4.0 recreational vehicle parts per hour.

Plant 8, Customer Service Facility

- (d) One (1) customer service facility, with touch-up surface coating and solvent emissions. All emissions are fugitive and will exit the building through general ventilation. Maximum capacity will increase from 0.5 to 2.25 recreational vehicles per hour.

Roadmaster Plant

- (f) Four (4) surface coating booths, known as SV-30, SV-31, SV-32 and SV-33, equipped with dry filters for air pollution control. Maximum production capacity will increase from 0.676 to 4.5 chassis per hour.

Aftermarket Fiberglass Plant

- (g) Two (2) fiberglass production areas known as SV-34 and SV-35, each equipped with dry filters for air pollution control. Total capacity for the facility will be parts to produce 1.0 recreational vehicles per hour.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 Volatile Organic Compounds (VOCs) [326 IAC 8-1-6]

- (a) Operations at the Aftermarket Fiberglass Plant shall be limited such that the potential to emit (PTE) of volatile organic compounds from the use of coatings, resins, gel coats, dilution solvents and cleanup solvents, shall be limited to less than twenty five (25) tons per twelve (12) consecutive month period. Therefore, the best available control technology (BACT) requirement in 326 IAC 8-1-6 (New Facilities: General Reduction Requirements) does not apply.

- (b) Monthly usage by weight, content of monomer, method of application, and other emission reduction techniques used for each gel coat and resin shall be recorded. Volatile organic HAP emissions shall be calculated by multiplying the usage of each gel coat and resin by the emission factor that is appropriate for the monomer content, method of application, and other emission reduction techniques used for each gel coat and resin, and summing the emissions for all gel coats and resins. Emission factors shall be obtained from the reference approved by IDEM, OAM.
- (c) The emission factors approved for use by IDEM, OAM shall be taken from the following reference: "Unified Emission Factors for Open Molding of Composites," Composites Fabricators Association, April 1999, with the exception of the emission factors for controlled spray application. This reference is included with this permit. For VOC-emitting operations not addressed by this reference, emission factors shall be taken from U.S. EPA's AP-42 document. For the purposes of these emission calculations, HAP monomer in resins and gel coats that is not styrene or methyl methacrylate shall be considered as styrene on an equivalent weight basis.

D.1.2 Hazardous Air Pollutants (HAPs) [326 IAC 2-4.1-1]

- (a) Operations at the Aftermarket Fiberglass Plant shall be limited such that the potential to emit (PTE) from the use of coatings, resins, gel coats, dilution solvents and cleanup solvents of any single hazardous air pollutant shall be limited to less than ten (10) tons per twelve (12) consecutive month period, and the PTE of any combination of HAPs shall be limited to less than twenty five (25) tons per twelve (12) consecutive month rolling period. Therefore, 326 IAC 2-4.1-1 (New Facilities: General Reduction Requirements) does not apply.
- (b) Monthly usage by weight, content of monomer that is HAP, method of application, and other emission reduction techniques used for each gel coat and resin shall be recorded. Volatile organic HAP emissions shall be calculated by multiplying the usage of each gel coat and resin by the emission factor that is appropriate for the HAP monomer content, method of application, and other emission reduction techniques used for each gel coat and resin, and summing the emissions for all gel coats and resins. Emission factors shall be obtained from the reference approved by IDEM, OAM.
- (c) The emission factors approved for use by IDEM, OAM shall be taken from the following reference: "Unified Emission Factors for Open Molding of Composites," Composites Fabricators Association, April 1999, with the exception of the emission factors for controlled spray application. This reference is included with this permit. For HAP-emitting operations not addressed by this reference, emission factors shall be taken from U.S. EPA's AP-42 document. For the purposes of these emission calculations, HAP monomer in resins and gel coats that is not styrene or methyl methacrylate shall be considered as styrene on an equivalent weight basis.

D.1.3 Volatile Organic Compounds (VOC) [326 IAC 8-2-9]

Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the organic compound (VOC) content of coating applied to recreational vehicle metal substrates shall be limited to 3.5 pounds of VOCs per gallon of coating less water, as delivered to the applicator, for extreme performance coatings.

Solvent sprayed from application equipment during cleanup or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

D.1.4 Particulate Matter (PM) [326 IAC 6-3-2(c)]

The PM from overspray from booths SV-5, SV-6, SV-9, SV-10, SV-11, SV-30 through SV-35, SV-37 and SV-38 shall not exceed the pound per hour emission rate established as E in the following formula:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

Pursuant to 326 IAC 6-3-2(c), the allowable particulate matter emissions rate from any process not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than 100 pounds per hour shall not exceed 0.551 pounds per hour.

D.1.5 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities.

Compliance Determination Requirements [326 IAC 2-1.1-11] [326 IAC 2-7-6(1)]

D.1.6 Testing Requirements [326 IAC 2-7-6(1), (6)]

The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the VOC limit specified in Condition D.1.1 and the HAPs limit specified in Condition D.1.2 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

D.1.7 Volatile Organic Compounds (VOCs) and Hazardous Air Pollutants (HAPs)

Compliance with the VOC and HAPs content and usage limitations contained in Conditions D.1.1, D.1.2 and D.1.3 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) using formulation data supplied by the coating manufacturer. IDEM, OAM, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

D.1.8 VOC and HAPs Emissions

Compliance with Conditions D.1.1 and D.1.2 shall be demonstrated at the end of each month based on the total volatile organic compound usage and hazardous air compound usage for the most recent twelve (12) month period.

D.1.9 Particulate Matter (PM)

The dry filters used for PM in booths SV-5, SV-6, SV-9, SV-10, SV-11, SV-30 through SV-35, SV-37 and SV-38 shall be in operation at all times when they are in operation.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.1.10 Operator Training Program

- (a) The Permittee shall implement an operator-training program as follows:
 - (1) All operators that perform painting operations, gel coat spray operations, resin spray operations, flow coat resin application operations or booth maintenance shall be trained in the proper set-up and operation of the particulate control system. All existing operators shall be trained within 60 days of permit reissuance. All new operators shall be trained upon hiring or transfer.
 - (2) Training shall include proper filter alignment, filter inspection and maintenance, and trouble shooting practices. The training program shall be written and retained on site. Copies of the training program, the list of trained operators and training records shall be maintained on site or available within 1 hour for inspection by IDEM.
 - (3) All operators shall be given refresher training annually.
- (b) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.11 Record Keeping Requirements

- (a) To document compliance with Conditions D.1.1, D.1.2 and D.1.3, the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be taken monthly for all coatings, and shall be complete and sufficient to establish compliance with the VOC emission limits of D.1.1, the HAPs emission limits described in Condition D.1.2, and the VOC content limits established in Condition D.1.3.
 - (1) The amount and VOC and HAP content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;
 - (2) A log of the dates of use;
 - (3) The volume weighted VOC content of the coatings used for each month;
 - (4) The cleanup solvent usage for each month;
 - (5) The total VOC and HAPs usage for each month; and
 - (6) The weight of VOCs and HAPs emitted for each compliance period.
- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.12 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.1.1 and D.1.2 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

SECTION D.2

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

Roadmaster Plant

- (e) Seventy two (72) welding stations and ten (10) cutting tables. Emissions are not controlled. Maximum production capacity will increase from 0.676 to 4.5 chassis per hour.

Aftermarket Fiberglass Plant

- (h) One (1) grinding area, known as DC-FG4, with particulate matter controlled by a dry filtered exhaust. Maximum capacity: 1,046 pounds per hour.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.2.1 Particulate Matter (PM) [326 IAC 6-3]

- (a) Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rate from the Roadmaster Plant welding operations shall not exceed 37.3 pounds per hour when operating at a process weight rate of 54,000 pounds per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

- (b) Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rate from the Aftermarket Fiberglass Plant closed loop grinding booth (DC-FG4) shall not exceed 2.66 pounds per hour when operating at a process weight rate of 1,049 pounds per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

D.2.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its control devices.

Compliance Determination Requirements [326 IAC 2-1.1-11] [326 IAC 2-7-6(1)]

D.2.3 Testing Requirements [326 IAC 2-7-6(1)] [326 IAC 2-1.1-11]

The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the PM limit specified in Condition D.2.1 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

D.2.4 Particulate Matter (PM)

The dry filters used for PM control in the grinding area (DC-FG4) shall be in operation at all times that the grinding area is in operation.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.2.5 Operator Training Program

- (a) The Permittee shall implement an operator-training program as follows:
 - (1) All operators that perform grinding operations or booth maintenance shall be trained in the proper set-up and operation of the particulate control system. All existing operators shall be trained within 60 days of permit reissuance. All new operators shall be trained upon hiring or transfer.
 - (2) Training shall include proper filter alignment, filter inspection and maintenance, and trouble shooting practices. The training program shall be written and retained on site. Copies of the training program, the list of trained operators and training records shall be maintained on site or available within 1 hour for inspection by IDEM.
 - (3) All operators shall be given refresher training annually.
- (b) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

SECTION D.3 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

PSD Minor Limit Conditions for the Entire Source

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.3.1 PSD Minor Limit [326 IAC 2-2] [40 CFR 52.21]

- (a) Pursuant to CP 039-9835-00182 issued on July 10, 1998, the total input of volatile organic compounds delivered to the applicators of surface coating and fiberglass facilities, including adhesives and cleanup solvents shall be less than 250 tons per 12 consecutive month period.
- (b) The equipment listed in Section D.1 of this permit shall now be included in the limit established in D.3.1(a).
- (c) Several of the facilities at the source have been renamed since the issuance of CP 039-9835-00182. For clarification purposes, this limit is revised as follows:

The total emissions of volatile organic compounds from all surface coating and fiberglass facilities, including adhesives and cleanup solvents, in Plant 3, Plant 4, Plant 5, Plant 6, Plant 8, Plant 9, the Roadmaster Chassis Plant and the Aftermarket Fiberglass Plant shall be less than 250 tons per 12 consecutive month period. This production limit is equivalent to limiting the potential to emit of volatile organic compounds to less than 250 tons per year. Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 not applicable.
- (d) For non-fiberglass operations, the volatile organic compound emissions shall be calculated as the total input of volatile organic compounds delivered to the applicators.
- (e) For fiberglass operations, the volatile organic compound emissions shall be calculated by multiplying the usage of each gel coat and resin by the emission factor that is appropriate for the monomer content, method of application, and other emission reduction techniques used for each gel coat and resin, and summing the emissions for all gel coats and resins. Emission factors shall be obtained from the reference approved by IDEM, OAM.
- (f) The emission factors for fiberglass operations approved for use by IDEM, OAM shall be taken from the following reference: "Unified Emission Factors for Open Molding of Composites," Composites Fabricators Association, April 1999, with the exception of the emission factors for controlled spray application. This reference is included with this permit. For HAP-emitting operations not addressed by this reference, emission factors shall be taken from U.S. EPA's AP-42 document. For the purposes of these emission calculations, HAP monomer in resins and gel coats that is not styrene or methyl methacrylate shall be considered as styrene on an equivalent weight basis.
- (g) Any change in equipment which may increase the potential to emit from the equipment covered in this permit to 250 tons per year, shall require a PSD permit pursuant to 326 IAC 2-2, before any such change may occur.

Compliance Determination Requirements [326 IAC 2-1.1-11] [326 IAC 2-7-6(1)]

D.3.2 VOC Emissions

Compliance with Condition D.3.1 shall be demonstrated within 30 days of the end of each month based on the total volatile organic compound usage for the most recent twelve (12) month period.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.3.3 Record Keeping Requirements

- (a) To document compliance with Condition D.3.1, the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC usage limits and/or the VOC emission limits established in Condition D.3.1.
- (1) The amount and VOC content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;
 - (2) A log of the dates of use;
 - (3) The volume weighted VOC content of the coatings used for each month;
 - (4) The cleanup solvent usage for each month;
 - (5) The total VOC usage for each day month; and
 - (6) The weight of VOCs emitted, including volatile organic HAP emitted from the fiberglass operations, for each compliance period.
- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.3.4 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.3.1 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION**

**PART 70 SOURCE MODIFICATION
CERTIFICATION**

Source Name: Monaco Coach Corporation
Source Address: 1722 Mishawaka Road, Elkhart, Indiana 46513
Mailing Address: P.O. Box 465, Wakarusa, Indiana 46573
Source Modification No.: SSM 039-11468-00182

**This certification shall be included when submitting monitoring, testing reports/results
or other documents as required by this approval.**

Please check what document is being certified:

- 9 Test Result (specify) _____
- 9 Report (specify) _____
- 9 Notification (specify) _____
- 9 Other (specify) _____

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

Monaco Coach Corporation
Elkhart, Indiana
Permit Reviewer: Pat Brennan/MES

Page 25 of 27
Source Modification No. SSM 039-11468-00182

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION**

Part 70 Source Modification Quarterly Report

Source Name: Monaco Coach Corporation
Source Address: 1722 Mishawaka Road, Elkhart, Indiana 46513
Mailing Address: P.O. Box 465, Wakarusa, Indiana 46573
Source Modification No.: SSM 039-11468-00182
Facility: Aftermarket Fiberglass Plant
Parameter: Volatile Organic Compounds (VOC)
Limit: Less than twenty five (25) tons per twelve (12) consecutive month period

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

9 No deviation occurred in this month.

9 Deviation/s occurred in this month.
Deviation has been reported on: _____

Submitted by: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION**

Part 70 Source Modification Quarterly Report

Source Name: Monaco Coach Corporation
Source Address: 1722 Mishawaka Road, Elkhart, Indiana 46513
Mailing Address: P.O. Box 465, Wakarusa, Indiana 46573
Source Modification No.: SSM 039-11468-00182
Facility: Aftermarket Fiberglass Plant
Parameter: Hazardous Air Pollutants (HAPs)
Limit: Less than twenty five (25) tons of any combination of HAPS per twelve (12) consecutive month period, less than ten (10) tons of any single HAP per twelve (12) consecutive month period

YEAR: _____

Worst Case HAP

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

Combination of HAPS

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Monaco Coach Corporation
Elkhart, Indiana
Permit Reviewer: Pat Brennan/MES

Page 27 of 27
Source Modification No. SSM 039-11468-00182

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION**

Part 70 Source Modification Quarterly Report

Source Name: Monaco Coach Corporation
Source Address: 1722 Mishawaka Road, Elkhart, Indiana 46513
Mailing Address: P.O. Box 465, Wakarusa, Indiana 46573
Source Modification No.: SSM 039-11468-00182
Facility: Entire Source
Parameter: Volatile Organic Compounds
Limit: Less 250 tons per twelve (12) consecutive month period

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

9 No deviation occurred in this month.

9 Deviation/s occurred in this month.
Deviation has been reported on: _____

Submitted by: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

Indiana Department of Environmental Management Office of Air Management

Addendum to the Technical Support Document for a Part 70 Significant Source Modification

Source Name:	Monaco Coach Corporation
Source Location:	1722 Mishawaka Road, Elkhart, Indiana 46513
County:	Elkhart
SIC Code:	3716, 3792, 7532, 7538 and 3082
Source Modification:	SSM 039-11468-00182
Permit Reviewer:	Patrick T. Brennan

On March 23, 2000, the Office of Air Management (OAM) had a notice published in the Elkhart Truth, Elkhart, Indiana, stating that Monaco Coach Corporation had applied for a Significant Source Modification for a custom motor home manufacturing source with dry filters for air pollution control. The notice also stated that OAM proposed to issue a Significant Source Modification for this operation and provided information on how the public could review the proposed Significant Source Modification and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this Significant Source Modification should be issued as proposed.

On April 14, 2000, Kurt W. Anderson, Director EH&S, Monaco Coach Corporation, submitted comments on the proposed Significant Source Modification. The comments are as follows: The permit language, if changed, has deleted language as ~~strikeouts~~ and new language **bolded**.

Comment 1:

Condition A.2(c), page 4 of 27: Condition A.2(c) should be revised to more accurately state "Capacity: parts to produce 4.0 recreational vehicles per hour".

Response 1:

Condition A.2(c) has been revised as follows:

- (c) Two (2) surface coating booths, known as SV-10 and SV-11, equipped with dry filters for air pollution control, will be converted to small parts painting. Capacity: **parts to produce** 4.0 recreational vehicle parts per hour.

Comment 2:

Condition A.2(e), page 5 of 27: Condition A.2(e) should be revised to delete the reference to electrostatic particulate control devices. The electrostatic control devices (i.e. smoke hogs) will not be installed in the remodeled Roadmaster Plant. The remodeled build has been set-up with a general ventilation system that will exhaust to the outside. Emissions from the welding operations will meet IAC 6-3.

Response 2:

Condition A.2(e) has been revised as follows:

- (e) Seventy two (72) welding stations and ten (10) cutting tables. **Emissions are not controlled.** ~~equipped with electrostatic particulate control devices.~~ Maximum production capacity will increase from 0.676 to 4.5 chassis per hour.

Comment 3:

Condition A.2(g), page 5 of 27: Condition A.2(g) should be revised to more accurately state "Total capacity for the facility will be parts to supply 1.0 recreational vehicle per hour". In the cover letter this area was referred to as a surface coating area instead of a fiberglass production area. To clarify, this area will be a fiberglass production area.

Response 3:

Condition A.2(g) has been revised as follows:

- (g) Two (2) fiberglass production areas known as SV-34 and SV-35, each equipped with dry filters for air pollution control. Total capacity for the facility will be **parts to produce 1.0 parts recreational vehicles** per hour.

Comment 4:

Condition A.2(h), page 5 of 27: Condition A.2(h) should be revised to delete the reference to closed loop grinding booths. The layout and production level at this facility the does not allow for the installation or need of a separate grinding booth. The grinding operations will be controlled by filtered exhaust.

Response 4:

Condition A.2(h) has been revised as follows:

- (h) One (1) ~~closed-loop grinding area booth~~, known as DC-FG4, with particulate matter controlled by **a dry filtered exhaust.** ~~a closed-loop dust collector.~~ Maximum capacity: 1,046 pounds per hour.

Comment 5:

Condition C.2, page 8 of 27: Monaco believes that requiring preventative maintenance plans for the booths and areas controlled by dry filters, serve no real purpose in protecting the environment because the training plan will address maintenance items related to the filters and other issues that could impact emissions to the environment. Any other issues that might be covered in a PMP, such as fans, would have no adverse impact on emissions to the atmosphere should a problem develop. Therefore, Monaco requests that IDEM re-evaluate if a PMP is necessary for this source.

Comment 6:

Condition C.9, at pages 10 and 11 of 27, neither 326 I.A.C. § 2-7-5 nor § 2-7-6 refer to or authorize a "Compliance Monitoring Plan," and 326 I.A.C. § 1-6 does not apply to Permittee. Even were this provision is generally authorized, its application to Permittee in its present form is arbitrary, capricious, an abuse of discretion and not otherwise in accordance with law.

Monaco requests that this condition be deleted.

Response to Comments 5 and 6:

IDEM has worked with members of the Clean Air Act Advisory Council's Permit Committee, Indiana Manufacturing Association, Indiana Chamber of Commerce and individual applicants regarding the Preventive Maintenance Plan, the Compliance Monitoring Plan and the Compliance Response Plan. IDEM has clarified the preventive maintenance requirements by working with sources on draft language over the past two years. The plans are fully supported by rules promulgated by the Air Pollution Control Board. The plans are the mechanism each permittee will use to verify continuous compliance with its permit and the applicable rules and will form the basis for each permittee's Annual Compliance Certification. Each permittee's ability to verify continuous compliance with its air pollution control requirements is a central goal of the Title V and FESOP permit programs.

The regulatory authority for and the essential elements of a compliance monitoring plan were clarified in IDEM's Compliance Monitoring Guidance, in May 1996. IDEM originally placed all the preventive maintenance requirements in the permit section titled "Preventive Maintenance Plan." Under that section the permittee's Preventive Maintenance Plan(PMP) had to set out requirements for the inspection and maintenance of equipment both on a routine basis and in response to monitoring. Routine maintenance was a set schedule of inspections and maintenance of the equipment. The second was inspection and maintenance in response to monitoring that showed that the equipment was not operating in its normal range. This monitoring would indicate that maintenance was required to prevent the exceedance of an emission limit or other permit requirement. The maintenance plan was to set out the "corrective actions" that the permittee would take in the event an inspection indicated an "out of specification situation", and also set out the time frame for taking the corrective action. In addition, the PMP had to included a schedule for devising additional corrective actions for out of compliance situations that the source had not predicted in the PMP. All these plans, actions and schedules were part of the Preventive Maintenance Plan, with the purpose of maintaining the permittee's equipment so that an exceedance of an emission limit or violation of other permit requirements could be prevented.

After issuing the first draft Title V permits on public notice in July of 1997, IDEM received comments from members of the regulated community regarding many of the draft permit terms, including the PMP requirements. One suggestion was that the corrective action and related schedule requirements be removed from the PMP requirement and placed into some other requirement in the permit. This suggestion was based, in some part, on the desire that a permittee's maintenance staff handle the routine maintenance of the equipment, and a permittee's environmental compliance and engineering staff handle the compliance monitoring and steps taken in reaction to an indication that the facility required maintenance to prevent an environmental problem.

IDEM carefully considered this suggestion and agreed to separate the "corrective actions" and related schedule requirements from the PMP. These requirements were placed into a separate requirement, which IDEM named the Compliance Response Plan (CRP). In response to another comment, IDEM changed the name of the "corrective actions" to "response steps." That is how the present CRP requirements became separated from the PMP requirement, and acquired their distinctive nomenclature.

Other comments sought clarification on whether the failure to follow the PMP was violation of the permit. The concern was that a permittee's PMP might call for the permittee to have, for example, three "widget" replacement parts in inventory. If one widgets was taken from inventory for use in maintenance, then the permittee might be in violation of the PMP, since there were no longer three widgets in inventory, as required by the PMP. Comments also expressed a view that if a maintenance employee was unexpectedly delayed in making the inspection under the PMP's schedule, for

example by the employee's sudden illness, another permit violation could occur, even though the equipment was still functioning properly.

IDEM considered the comments and revised the PMP requirement so that if the permittee fails to follow its PMP, a permit violation will occur only if the lack of proper maintenance causes or contributes to a violation of any limitation on emissions or potential to emit. This was also the second basis for separating the compliance maintenance response steps from the PMP and placing them in the Compliance Response Plan (CRP). Unlike the PMP, the permittee must conduct the required monitoring and take any response steps as set out in the CRP (unless otherwise excused) or a permit violation will occur.

The Compliance Monitoring Plan is made up of the PMP, the CRP, the compliance monitoring and compliance determination requirements in section D of the permit, and the record keeping and reporting requirements in sections C and D. IDEM decided to list all these requirements under this new name, the Compliance Monitoring Plan (CMP), to distinguish them from the PMP requirements. The section D provisions set out which facilities must comply with the CMP requirement. The authority for the CMP provisions is found at 326 IAC 2-7-5(1), 2-7-5(3), 2-7-5(13), 2-7-6(1), 1-6-3 and 1-6-5.

Most permittees already have a plan for conducting preventive maintenance for the emission units and control devices. It is simply a good business practice to have identified the specific personnel whose job duties include inspecting, maintaining and repairing the emission control devices. The emission unit equipment and the emission control equipment may be covered by a written recommendation from the manufacturer set out schedules for the regular inspection and maintenance of the equipment. The permittee will usually have adopted an inspection and maintenance schedule that works for its particular equipment and process in order to keep equipment downtime to a minimum and achieve environmental compliance. The manufacturer may also have indicated, or the permittee may know from experience, what replacement parts should be kept on hand. The permittee may already keep sufficient spare parts on hand so that if a replacement is needed, it can be quickly installed, without a delay in the permittee's business activities and without an environmental violation. For the most part, the PMP can be created by combining present business practices and equipment manufacturer guidance into one document, the Preventive Maintenance Plan (PMP).

The permittee has 90 days to prepare, maintain and implement the PMP. IDEM is not going to draft the PMP. Permittees know their processes and equipment extremely well and are in the best position to draft the PMP. IDEM's air inspectors and permit staff will be available to assist the permittee with any questions about the PMP. IDEM may request a copy of the PMP to review and approve.

The Preventive Maintenance Plan requirement must be included in every applicable Title V permit pursuant to 326 IAC 2-7-5(13) and for each FESOP permit pursuant to 326 IAC 2-8-4(9). Both of those rules refer back to the Preventive Maintenance Plan requirement as described in 326 IAC 1-6-3. This Preventive Maintenance Plan rule sets out the requirements for:

- (1) Identification of the individuals responsible for inspecting, maintaining and repairing the emission control equipment (326 IAC 1-6-3(a)(1)),
- (2) The description of the items or conditions in the facility that will be inspected and the inspection schedule for said items or conditions (326 IAC 1-6-3(a)(2)), and
- (3) The identification and quantification of the replacement parts for the facility which the permittee will maintain in inventory for quick replacement (326 IAC 1-6-3(a)(2)).

It is clear from the structure of the wording in 326 IAC 1-6-3 that the PMP requirement affects the entirety of the applicable facilities. Only 326 IAC 1-6-3(a)(1) is limited, in that it requires identification of the personnel in charge of only the emission control equipment, and not any other facility equipment. The commissioner may require changes in the maintenance plan to reduce excessive malfunctions in any control device or combustion or process equipment under 326 IAC 1-6-5.

The CRP requirement of response steps and schedule requirements are another example of documenting procedures most permittees already have developed in the course of good business practices and the prevention of environmental problems. Equipment will often arrive with the manufacturer's trouble shooting guide. It will specify the steps to take when the equipment is not functioning correctly. The steps may involve some initial checking of the system to locate the exact cause, and other steps to place the system back into proper working order. Using the trouble shooting guide and the permittee's own experience with the equipment, the steps are taken in order and as scheduled until the problem is fixed.

A permittee will likely already have a procedure to follow when an unforeseen problem situation occurs. The procedure may list the staff to contact in order to select a course of action, or other step, before the equipment problem creates an environmental violation or interrupts the permittee's business process.

The Compliance Monitoring Plan (CMP) is consistent with IDEM's Compliance Monitoring Guidance released in May of 1996. The guidance discusses corrective action plans setting out the steps to take when compliance monitoring shows an out of range reading (Guidance, page 13). Some of the terminology has changed, as a result of comments from regulated sources, but the requirements in the permit do not conflict with the guidance.

There are no changes to these conditions.

Comment 7:

Condition C.12, page 13 of 27: In previous permits, it was agreed that the sentence "These records shall be kept at the source location for a minimum of three (3) years and available upon the request of an IDEM, OAM, representative" would be replaced with the following sentence: "These records shall be kept at the source location or at an off-site location and available within one (1) hour upon verbal request of an IDEM, OAM, representative, for a minimum of three (3) years." Monaco also believes that the two sentences immediately following the deleted sentence should also be deleted and replaced with the following to be consistent with language in other Monaco permits: "They may be stored elsewhere for the remaining two (2) years provided they are made available within thirty (30) days after written request."

Monaco's record keeping practices are to maintain all compliance tracking records at our Indiana Corporate offices in Wakarusa, about 8 miles south of Elkhart. This practice has been approved in previous permits.

Response 7:

Condition C.12 has been revised as follows:

C.12 General Record Keeping Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-6]

- (a) Records of all required monitoring data and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location **or at an offsite location**

for a minimum of three (3) years and available upon the request of an IDEM, OAM, representative. **They may be stored elsewhere for the remaining two (2) years provided they are made available within thirty (30) days after written request.** ~~The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a written request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.~~

Comment 8:

Condition C.13(c), page 14 of 27: Condition C.13(c) should be revised to extend the reporting time for timely submittals. Monaco requests that the thirty (30) day reporting limit be extended to sixty (60) days. Because of the volume of information that must be gathered and the reliance on a multitude of data sources, the current 30 day reporting deadline is unreasonable and creates an excessive demand on staff. Extending the deadline to 60 days would allow for better management of resources and improved data quality and accuracy.

Response 8:

IDEM feels that quarterly reporting is necessary to assure continuous compliance monitoring. In the case of Monaco Coach, the source is operating under a VOC limit of less than 25 tons per twelve (12) consecutive month period for the Aftermarket Fiberglass Plant, and an overall site VOC limit of less than 249 tons per twelve (12) consecutive month period. Monthly record keeping and quarterly reporting are required. IDEM/OAM believes that a 30 day time limit for reporting is necessary to assure continuous compliance with these limits.

Comment 9:

Section D.1, Description Box, page 15 of 27: The following descriptions should be amended to more accurately reflect the permit application:

- (a) Plant 5 Parts Painting (c): Capacity: parts to produce 4.0 recreational vehicles per hour.
- (b) Aftermarket Fiberglass Plant (g): Total capacity to produce parts to supply 1.0 recreational vehicles per hour.

Response 9:

Section D.1 has been modified to address the corrections requested above, plus those requested in Comments 1, 3 and 4 as follows:

SECTION D.1

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

Plant 4, Service Paint

- (a) Two (2) paint bays known as SV-37 and SV-38, equipped with dry filters for air pollution control. Total capacity of Plant 4 will increase from 0.5 to 1.0 recreational vehicles per hour.

Plant 5, Parts Painting

- (b) Three (3) surface coating booths, known as SV-5, SV-6 and SV-9, equipped with dry filters for air pollution control, will be converted to fiberglass production areas. Production will remain at the current maximum capacity of parts to produce 4.5 recreational vehicles per hour.
- (c) Two (2) surface coating booths, known as SV-10 and SV-11, equipped with dry filters for air pollution control, will be converted to small parts painting. Capacity: **parts to produce** 4.0 recreational vehicle parts per hour.

Plant 8, Customer Service Facility

- (d) One (1) customer service facility, with touch-up surface coating and solvent emissions. All emissions are fugitive and will exit the building through general ventilation. Maximum capacity will increase from 0.5 to 2.25 recreational vehicles per hour.

Roadmaster Plant

- (f) Four (4) surface coating booths, known as SV-30, SV-31, SV-32 and SV-33, equipped with dry filters for air pollution control. Maximum production capacity will increase from 0.676 to 4.5 chassis per hour.

Aftermarket Fiberglass Plant

- (g) Two (2) fiberglass production areas known as SV-34 and SV-35, each equipped with dry filters for air pollution control. Total capacity for the facility will be **parts to produce** 1.0 **parts recreational vehicles** per hour.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Comment 10:

Condition D.1.4, page 17 of 27: Sources referenced are below the de minimus for this rule and should be identified as not subject to the rule.

Response 10:

There is no de minimus level for this rule. Condition D.1.4 has been revised as follows:

D.1.4 Particulate Matter (PM) [326 IAC 6-3-2(c)]

The PM from overspray from booths SV-5, SV-6, SV-9, SV-10, SV-11, SV-30 through SV-35, SV-37 and SV-38 shall not exceed the pound per hour emission rate established as E in the following formula:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

Pursuant to 326 IAC 6-3-2(c), the allowable particulate matter emissions rate from any process not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than 100 pounds per hour shall not exceed 0.551 pounds per hour.

Comment 11:

Condition D.1.5: Monaco believes that requiring preventative maintenance plans for the booths and areas controlled by dry filters, serve no real purpose in protecting the environment because the training plan will address maintenance items related to the filters and other issues that could impact emissions to the environment. Any other issues that might be covered in a PMP, such as fans, would have no adverse impact on emissions to the atmosphere should a problem develop. Therefore, Monaco requests that IDEM re-evaluate if a PMP is necessary for this source.

Response 11:

Please see the response to Comments 5 and 6 for a discussion of the rationale and regulatory authority for a preventative maintenance plan (PMP). The operation of a training program in place of the daily filter inspections and monthly overspray inspections does not eliminate the requirement for a PMP. In the case of Condition D.1.5, uncontrolled potential PM emissions from the surface coating operations exceed 250 tons per year. Because there is no other permit condition limiting PM emissions to less than 250 tons per year, operation the dry filters, and a PMP to assure their integrity, is necessary to ensure that 326 IAC 2-2 is not applicable.

Comment 12:

Condition D.1.9, page 17 of 27: Correct the word "...when the are in operation" to "...when they are in operation".

Response 12:

Condition D.1.9 has been revised as follows:

D.1.9 Particulate Matter (PM)

The dry filters used for PM in booths SV-5, SV-6, SV-9, SV-10, SV-11, SV-30 through SV-35, SV-37 and SV-38 shall be in operation at all times when ~~they the~~ are in operation.

Comment 13:

Conditions D.1.10 and D.1.11, pages 17 and 18 of 27: Conditions D.1.10 and D.1.11 should be deleted in their entirety and replaced with the following:

"D.1.10 Operator-Training Program

- (a) The Permittee shall implement an operator-training program.
 - (1) All operators that perform gel coat spray operations, resin spray operations, flow coat resin application operations or booth maintenance shall be trained in the proper set-up and operation of the particulate control system. All existing operators shall be trained within 60 days of permit reissuance. All new operators shall be trained upon hiring or transfer.
 - (2) Training shall include proper filter alignment, filter inspection and maintenance, and trouble shooting practices. The training program shall be written and retained on site. Copies of the training program, the list of trained operators and training records shall be maintained on site or available within 1 hour for inspection by IDEM.
 - (3) All operators shall be given refresher training annually.

Response 13:

Condition D.1.10 has been revised as follows. This training program has previously been approved by IDEM and implemented at other Monaco Coach plants.

D.1.10 Monitoring Operator Training Program

- ~~(a) Daily inspections shall be performed to verify the placement, integrity and particle loading of the filters. To monitor the performance of the dry filters, weekly observations shall be made of the overspray from the surface coating booth stacks SV-5, SV-6, SV-9, SV-10, SV-11, SV-30 through SV-35, SV-37 and SV-38 while one or more of the booths are in operation. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.~~
- ~~(b) Monthly inspections shall be performed of the coating emissions from the stack and the presence of overspray on the rooftops and the nearby ground. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when a noticeable change in overspray emission, or evidence of overspray emission is observed. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.~~
- (a) The Permittee shall implement an operator-training program as follows:
 - (1) All operators that perform painting operations, gel coat spray operations, resin spray operations, flow coat resin application operations or booth maintenance shall be trained in the proper set-up and operation of the

particulate control system. All existing operators shall be trained within 60 days of permit reissuance. All new operators shall be trained upon hiring or transfer.

(2) Training shall include proper filter alignment, filter inspection and maintenance, and trouble shooting practices. The training program shall be written and retained on site. Copies of the training program, the list of trained operators and training records shall be maintained on site or available within 1 hour for inspection by IDEM.

(3) All operators shall be given refresher training annually.

(b) (e) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

In addition, Condition D.1.11 has been revised as follows:

D.1.11 Record Keeping Requirements

(a) To document compliance with Conditions D.1.1, D.1.2 and D.1.3, the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be taken monthly for all coatings, and shall be complete and sufficient to establish compliance with the VOC emission limits of D.1.1, the HAPs emission limits described in Condition D.1.2, and the VOC content limits established in Condition D.1.3.

(1) The amount and VOC and HAP content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;

(2) A log of the dates of use;

(3) The volume weighted VOC content of the coatings used for each month;

(4) The cleanup solvent usage for each month;

(5) The total VOC and HAPs usage for each month; and

(6) The weight of VOCs and HAPs emitted for each compliance period.

~~(b) To document compliance with Conditions D.1.9 and D.1.10, the Permittee shall maintain a log of weekly overspray observations, daily and monthly inspections, and those additional inspections prescribed by the Preventive Maintenance Plan.~~

(b) (e) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

Comment 14:

Condition D.1.12 Page 19 of 27: Condition D.1.12 should be revised to extend the reporting time for timely submittals. Monaco requests that the thirty (30) day reporting limit be extended to sixty (60) days. Because of the volume of information that must be gathered and the reliance on a multitude of data sources, the proposed 30 day reporting deadline is unreasonable and creates an excessive demand on staff. Extending the deadline to 60 days would allow for better management of resources and improved data quality and accuracy.

Response 14:

See response to Comment 8.

Comment 15:

Section D.2, Description Box, page 20 of 27: The following descriptions should be amended to more accurately reflect the permit:

- (a) Roadmaster Plant (e): delete the reference "equipped with electrostatic particulate control devices".
- (b) Aftermarket Fiberglass Plant (h): Change the description from "One (1) closed loop grinding booth, known as DC-FG4, with particulate matter controlled by a closed loop dust collector" to "One (1) grinding area, known as DC-FG4, with particulate matter controlled by a dry filtered exhaust".

Response 15:

The PM and PM₁₀ emissions from welding operations in the TSD assumed a 50% control efficiency from the electrostatic particulate control devices. The absence of these devices increases potential PM and PM₁₀ emissions by 40.5 tons per year, and potential emissions of magnesium, a hazardous air pollutant, by 7.71 tons per year.

The table below summarizes the revised potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Part 70 source modification.

	Revised Potential to Emit (tons/year)						
Process/facility	PM	PM ₁₀	SO ₂	VOC	CO	NO _x	HAPs
Modified Source	118	118	0.09	249	3.33	15.7	157
PSD Threshold Level	250	250	250	250	250	250	

This modification to an existing minor stationary source is still not major because the emission increase is less than the PSD threshold levels. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

The source is currently operating under a limit of less than 250 tons per year of VOC for the entire source under CP 039-9835-00182. This significant source modification will be incorporated into the existing limit, which is contained in Section D.3. The source will continue to be a minor source under PSD rules.

Potential emissions of PM, PM₁₀ and HAPs from surface coating operations have been reduced in proportion to the VOC reductions necessary to meet the 249 ton per year VOC limit.

The revised potential PM emission rate of 18.5 pounds per hour (81.0 tons per year) from welding operations is less than the 326 IAC 6-3-2 allowable PM emission rate of 37.3 pounds per hour, calculated on page 9 of 11 of the TSD. Therefore, despite the absence of the electrostatic control devices, the welding operations continue to comply with this rule.

The equipment list in Section D.2 has been revised as follows:

SECTION D.2

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

Roadmaster Plant

- (e) Seventy two (72) welding stations and ten (10) cutting tables. **Emissions are not controlled.** ~~equipped with electrostatic particulate control devices.~~ Maximum production capacity will increase from 0.676 to 4.5 chassis per hour.

Aftermarket Fiberglass Plant

- (h) One (1) ~~closed-loop~~ grinding area ~~booth~~, known as DC-FG4, with particulate matter controlled by a **dry filtered exhaust.** ~~a closed-loop dust collector.~~ Maximum capacity: 1,046 pounds per hour.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Comment 16:

Condition D.2.2, page 20 of 27: Monaco believes that requiring preventative maintenance plans for the booths and areas controlled by dry filters, serves no real purpose in protecting the environment because the training plan will address maintenance items related to the filters and other issues that could impact emissions to the environment. Any other issues that might be covered in a PMP, such as fans, would have no adverse impact on emissions to the atmosphere should a problem develop. Therefore, Monaco requests that IDEM re-evaluate if a PMP is necessary for this source.

Response 16:

See response to Comment 11.

Comment 17:

Condition D.2.4, page 21 of 27: Condition D.2.4 should be modified to delete references to the electrostatic devices used for PM control of the welding operations. These controls are not required to meet IAC 6-3 and Monaco does not intend to install such controls.

Response 17:

Condition D.2.4 has been revised as follows:

D.2.4 Particulate Matter (PM)

~~The electrostatic devices used for PM control in the welding operation and the dry filters used for PM control in the closed-loop grinding area booth (DC-FG4) shall be in operation and control emissions from the welding operation and the grinding booth at all times that the grinding area is these facilities are in operation.~~

Comment 18:

Conditions D.2.5 and D.2.6, pages 21 and 22 of 27: Conditions D.2.5 and D.2.6 should be deleted in their entirety and replaced with the following:

"D.1.10 Operator-Training Program

- (a) The Permittee shall implement an operator-training program.
 - (1) All operators that perform gel coat spray operations, resin spray operations, flow coat resin application operations or booth maintenance shall be trained in the proper set-up and operation of the particulate control system. All existing operators shall be trained within 60 days of permit reissuance. All new operators shall be trained upon hiring or transfer.
 - (2) Training shall include proper filter alignment, filter inspection and maintenance, and trouble shooting practices. The training program shall be written and retained on site. Copies of the training program, the list of trained operators and training records shall be maintained on site or available within 1 hour for inspection by IDEM.
 - (3) All operators shall be given refresher training annually.

Response 18:

Conditions D.2.5 and D.2.6 have been revised as follows. This training program has previously been approved by IDEM and implemented at other Monaco Coach plants.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.2.5 Monitoring Operator Training Program

- ~~(a) Daily inspections shall be performed to verify the placement, integrity and particle loading of the filters. To monitor the performance of the dry filters, weekly observations shall be made of the particulate matter from the closed-loop grinding booth (DC-FG4) while the booth is in operation. The Compliance Response Plan shall be followed whenever a~~

~~condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.~~

~~(b) Monthly inspections shall be performed of the grinding emissions from the stack and the presence of particulate matter on the rooftops and the nearby ground. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when a noticeable change in particulate emissions, or evidence of particulate emissions are observed. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.~~

(a) The Permittee shall implement an operator-training program as follows:

(1) All operators that perform grinding operations or booth maintenance shall be trained in the proper set-up and operation of the particulate control system. All existing operators shall be trained within 60 days of permit reissuance. All new operators shall be trained upon hiring or transfer.

(2) Training shall include proper filter alignment, filter inspection and maintenance, and trouble shooting practices. The training program shall be written and retained on site. Copies of the training program, the list of trained operators and training records shall be maintained on site or available within 1 hour for inspection by IDEM.

(3) All operators shall be given refresher training annually.

(b) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

Record Keeping and Reporting Requirement ~~[326 IAC 2-7-5(3)] [326 IAC 2-7-19]~~

~~D.2.6 Record Keeping Requirements~~

~~(a) To document compliance with Conditions D.2.4 and D.2.5, the Permittee shall maintain a log of weekly particulate matter observations, daily and monthly inspections, and those additional inspections prescribed by the Preventive Maintenance Plan.~~

~~(b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.~~

Comment 19:

Condition D.3.2, page 23 of 27: Condition D.3.2 should be revised to extend the reporting time for timely submittals. Monaco requests that the thirty-(30) day reporting limit be extended to sixty (60) days. Because of the volume of information that must be gathered and the reliance on a multitude of data sources, the proposed 30 day reporting deadline is unreasonable and creates an excessive demand on staff. Extending the deadline to 60 days would allow for better management of resources and improved data quality and accuracy.

Response 19:

See response to comment 8.

Comment 20:

Condition D.3.4, page 23 of 27: Condition D.3.4 should be revised to extend the reporting time for timely submittals. Monaco requests that the thirty-(30) day reporting limit be extended to sixty (60) days. Because of the volume of information that must be gathered and the reliance on a multitude of data sources, the proposed 30 day reporting deadline is unreasonable and creates an excessive demand on staff. Extending the deadline to 60 days would allow for better management of resources and improved data quality and accuracy.

Response 20:

See response to comment 8.

Comment 21:

Certification Report and Quarterly Emission Reports, page 24 to 27 of 27: Certification statement should be included on quarterly reports and not be required as a separate form. Certification form should be limited to monitoring, testing reports/results or other non-emission report submittals.

Response 21:

OAM has developed a standardized set of forms for emissions monitoring and reporting. Many sources, particularly those with only particulate emissions, do not require quarterly reporting. Placing the certification on a separate form provides a reporting mechanism that is applicable to all sources.

Comment 22:

Quarterly Emission Report forms, page 25 to 27 of 27: Delete "column 2". All this information is available in report and provides no added value.

Response 22:

OAM believes that the second column is valid, and is especially useful in a source with a rolling limit.

Comment 23:

Technical Support Document. IDEM should revise the Technical Support Document to incorporate the comments described above.

Response 23:

The OAM corrects permit errors in the form of a Technical Support Document Addendum. The original technical support document does not change from the version that was subject to public notice, in order to maintain the integrity of the review process. The technical support document is utilized as a technical tool that allows the source to understand the OAM's decision in a more detailed manner. This document is not an enforceable document, but an aid in understanding the permit conditions.

Indiana Department of Environmental Management Office of Air Management

Technical Support Document (TSD) for a Part 70 Significant Source Modification

Source Background and Description

Source Name:	Monaco Coach Corporation
Source Location:	1722 Mishawaka Road, Elkhart, Indiana 46513
County:	Elkhart
SIC Code:	3716, 3792, 7532, 7538 and 3082
Operation Permit No.:	T 039-7511-00182
Operation Permit Issuance Date:	Not Yet Issued
Significant Source Modification No.:	SSM 039-11468-00182
Permit Reviewer:	Patrick T. Brennan

The Office of Air Management (OAM) has reviewed an application from the Monaco Coach Corporation relating to the modification and operation of its towable and motorized recreational vehicle manufacturing source. This application involves construction, relocation and capacity increases of the following emission units and pollution control devices:

Plant 4, Service Paint

- (a) Two (2) paint bays known as SV-37 and SV-38, equipped with dry filters for air pollution control. Total capacity of Plant 4 will increase from 0.5 to 1.0 recreational vehicles per hour.

Plant 5, Parts Painting - Chassis painting conducted in booths SV-5, SV-6, SV-9, SV-10 and SV 11 will be moved to the new Roadmaster Plant.

- (b) Three (3) surface coating booths, known as SV-5, SV-6 and SV-9, equipped with dry filters for air pollution control, will be converted to fiberglass production areas. Production will remain at the current maximum capacity of parts to produce 4.5 recreational vehicles per hour.
- (c) Two (2) surface coating booths, known as SV-10 and SV-11, equipped with dry filters for air pollution control, will be converted to small parts painting. Capacity: 4.0 recreational vehicle parts per hour.

Plant 8, Customer Service Facility - The existing customer service facility (Plant 9) will be combined with the current Roadmaster plant into an expanded customer service facility.

- (d) One (1) customer service facility, with touch-up surface coating and solvent emissions. All emissions are fugitive and will exit the building through general ventilation. Maximum capacity will increase from 0.5 to 2.25 recreational vehicles per hour.

Roadmaster Plant - Chassis construction from the existing Roadmaster Plant and chassis painting from Plant 5 will be combined into the new Roadmaster Plant, located in the former Bull Moose facility.

- (e) Seventy two (72) welding stations and ten (10) cutting tables, equipped with electrostatic particulate control devices. Maximum production capacity will increase from 0.676 to 4.5 chassis per hour.
- (f) Four (4) surface coating booths, known as SV-30, SV-31, SV-32 and SV-33, equipped with dry filters for air pollution control. Maximum production capacity will increase from 0.676 to 4.5 chassis per hour.

Aftermarket Fiberglass Plant

- (g) Two (2) fiberglass production areas known as SV-34 and SV-35, and one (1) grinding booth (DC), each equipped with dry filters for air pollution control. Total capacity for the facility will be 1.0 parts per hour.
- (h) One (1) closed loop grinding booth, known as DC-FG4, with particulate matter controlled by a closed loop dust collector. Maximum capacity: 1,046 pounds per hour.

The source has additional fiberglass operations which are previously permitted under permit 039-9835-00182, issued on July 10, 1998.

History

On November 15, 1999, the Monaco Coach Corporation submitted an application to the OAM to update its Part 70 operating permit application to include the acquisition of certain facilities on the adjacent Bull Moose property. This application also requested capacity increases at certain existing facilities. The Part 70 permit for the existing Monaco Coach source is in preparation, but has not yet been issued. After consultation between the source and the OAM, it was determined that this application should be treated as a significant source modification to a yet to be issued Part 70 permit.

The names of several of the buildings and plants at Monaco Coach Corporation have changed since previous OAM permits were issued. For clarification purposes, the following are the current and former names of all production facilities. Unless a building or facility was specifically noted in the preceding equipment list, the permitted processes remain unchanged, only the building name has changed.

Current Building/Plant Name	Former Building/Plant Name
Plant 3	Dynasty Plant
Plant 4/Service Paint	Dynasty Plant
Plant 5/Fiberglass, Paint Shop	Dynasty Plant
Plant 6	Windsor Plant
Plant 8/Service Center Annex	Former Roadmaster Plant, and Plant 9 (combined into one facility)
Roadmaster Plant	Bull Moose Plant
Aftermarket Fiberglass Plant	Bull Moose Tool Shop

Existing Approvals

The source applied for a Part 70 Operating Permit T039-7511-00182 on December 12, 1996. This permit has not yet been issued by the OAM. The source has been operating under previous approvals including, but not limited to the following:

- (a) Permit 039-4577-00182, issued on March 26, 1996,
- (b) Permit 039-9835-00182, issued on July 10, 1998,
- (c) Permit 039-333, issued on December 29, 1993. This permit was issued to Bock Industries, the former owner of the Bull Moose property. This permit contains the boiler at the Bull Moose facility, and will be transferred to Monaco Coach Corporation.

All conditions from previous approvals remain in effect except the following:

- (a) Permit 039-4577-00182, issued on March 26, 1996,

Condition #5: 326 IAC 2-2 (PSD), which limited VOC emissions from the entire source to 249 tons per year was superseded by conditions in Permit 039-9835-00182.
- (b) Permit 039-9835-00182, issued on July 10, 1998,

Section D.2, PSD Minor limits for the Source, is superseded by Section D.3 of this permit.

Enforcement Issue

There are no enforcement actions pending.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (EF)
SV-30,31, 32	Roadmaster Chassis Painting	30	3.0	24,000	70
SV-33	Roadmaster Chassis Painting	30	2.0	12,000	70
SV-34, 35	Aftermarket Fiberglass	30	2.0	12,000	70
SV-37,38	Plant 4, Service Paint	30	3.5	20,000	70

Recommendation

The staff recommends to the Commissioner that the Part 70 Significant Source Modification be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on November 15, 1999. Additional information was received on January 20, and February 24, 2000.

Emission Calculations

See pages 1 through 12 of 12 of Appendix A of this document for detailed emissions calculations.

Potential To Emit of Modification

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U.S. EPA.”

This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	458
PM ₁₀	458
SO ₂	0.0
VOC	645
CO	0.0
NO _x	0.0

HAP's	Potential To Emit (tons/year)
MEK	7.31
Ethyl Benzene	17.1
Styrene	50.2
Toluene	68.7
Xylene	80.3
Hexane	64.2
MIBK	0.700
Methylene Chloride	2.53
Glycol Ethers	1.08
Methanol	0.394
Magnesium	15.4
Nickel	0.030
Chromium	0.090
TOTAL	310

Actual Emissions

The following table shows the actual emissions from the source. This information reflects the 1997 emissions OAM emissions data for criteria pollutants and 1998 emissions data for HAPs.

Pollutant	Actual Emissions (tons/year)
PM	0.220
PM ₁₀	0.220
SO ₂	0.0
VOC	17.12
CO	0.0
NO _x	0.0
Ethyl benzene	0.960
Hexamethylene-1;6 - diisocyanate	0.004
Hexane	0.340
Methanol	1.97
Methyl Chloroform	0.260
MEK	2.59
MIBK	8.54
Methyl Methacrylate	0.060
Methylene Chloride	7.93
Styrene	0.94
Tetrachloroethylene	0.080
Toluene	16.46
Glycol Ethers	4.18

County Attainment Status

The source is located in Elkhart County.

Pollutant	Status
PM ₁₀	attainment
SO ₂	attainment
NO ₂	attainment
Ozone	attainment
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NO_x) are precursors for the formation of ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to the ozone standards. Elkhart County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) Elkhart County has been classified as attainment or unclassifiable for the remaining criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (c) Fugitive Emissions
Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive PM emissions are not counted toward determination of PSD and Emission Offset applicability.

Source Status

Existing Source PSD or Emission Offset Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/year)
PM	32.1
PM ₁₀	32.1
SO ₂	0.08
VOC	249.7
CO	2.83
NO _x	13.9

- (a) This existing source is not a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not one of the 28 listed source categories.
- (b) These emissions are based upon CP 003-9835-00182.

Potential to Emit of the Entire Source After Issuance of Modification

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Part 70 source modification.

	Potential to Emit (tons/year)						
Process/facility	PM	PM ₁₀	SO ₂	VOC	CO	NO _x	HAPs
Entire Source	77.8	77.8	0.09	249	3.33	15.7	149
PSD Threshold Level	250	250	250	250	250	250	

This modification to an existing minor stationary source is not major because the emission increase is less than the PSD threshold levels. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

The source is currently operating under a limit of less than 250 tons per year of VOC for the entire source under CP 039-9835-00182. This significant source modification will be incorporated into the existing limit, and the source will continue to be a minor source under PSD rules.

Potential emissions of PM, PM₁₀ and HAPs from surface coating operations have been reduced in proportion to the VOC reductions necessary to meet the 249 ton per year VOC limit.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source has submitted their Part 70 (T039-7511-00182) application on December 12, 1996. The capacity increases and new production facilities being reviewed under this permit shall be incorporated in the submitted Part 70 application.

Justification for Modification

- (a) The Part 70 Operating Permit is being modified through a Part 70 Significant Source Modification to a yet to be issued Part 70 Operating Permit because the potential to emit before controls of this modification exceeds twenty five (25) tons per year. This modification is being performed pursuant to 326 IAC 2-7-10.5(f)(4).
- (b) Since the Part 70 Operating Permit for this source has not been issued yet, the approval of this Significant Source Modification will allow the source to construct and operate.

Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this proposed modification.
- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this proposed modification.

State Rule Applicability - Entire Source

326 IAC 2-2 and 40 CFR 52.21 (PSD Minor Limit)

- (a) Pursuant to CP 039-9835-00182, issued on July 10, 1998, the total input of volatile organic

compounds delivered to the applicators of surface coating and fiberglass facilities including adhesives and clean-up solvents for the Service Paint Area, Dynasty Plant (existing facilities and new facilities), Windsor Plant, and Roadmaster Plant shall be limited to less than 250 tons per twelve (12) consecutive month period. This production limitation is equivalent to limiting the potential to emit of volatile organic compounds to less than 250 tons per year. Therefore, the Prevention of Significant Deterioration (PSD) rules, 326 IAC 2-2, 40 CFR 52.21 and 40 CFR 124, will not apply.

- (b) The equipment covered by Condition D.1 of this permit shall be included in the limit established by D.2.1(a), using the methodology for demonstrating compliance with the MACT determination as established in Conditions D.1.2, and D.1.6, and D.1.10.
- (c) Any change or modification which may increase the potential to emit to 250 tons per year, from the equipment covered in this permit, shall require a PSD permit pursuant to 326 IAC 2-2, before such change may occur.

326 IAC 2-6 (Emission Reporting)

This source is subject to 326 IAC 2-6 (Emission Reporting), because it has the potential to emit more than one hundred (100) tons per year of VOC and PM₁₀. Pursuant to this rule, the owner/operator of the source must annually submit an emission statement for the source. The annual statement must be received by July 1 of each year and contain the minimum requirement as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8) (Emission Statement Operating Year).

326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemption Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability - Individual Facilities

The applicability of the OAM rules governing the various processes included in this modification is summarized in the following table.

Facility	Applicable Rule(s)
Plant 4 Service Paint	326 IAC 6-3-2 applies for overspray 326 IAC 8-2-9 applies for metal substrates, coating is compliant 326 IAC 8-1-6 applies for fiberglass substrates, existing BACT analysis remain valid

Facility	Applicable Rule(s)
Plant 5 Parts Painting	326 IAC 6-3-2 applies for overspray 326 IAC 8-2-9 applies for parts painting, all coatings are compliant
Plant 8 Customer Service Facility	326 IAC 6-3-2 applies for overspray 326 IAC 8-2-9 applies for metal substrates, all coatings are compliant
Roadmaster Chassis Plant	326 IAC 6-3-2 applies for overspray and welding 326 IAC 8-2-9 applies for chassis painting, all coatings are compliant
Aftermarket Fiberglass Plant	326 IAC 6-3-2 applies for overspray and grinding 326 IAC 8-2-9 does not apply, no metal substrates 326 IAC 8-1-6 does not apply, source has taken VOC limit less than 25 tons per consecutive 12 month period 326 IAC 2-4.1-1 does not apply, source has taken a single HAP limit of less than 10 tons per consecutive 12 month period and combined HAPs limit of less than 25 tons per consecutive 12 month period

326 IAC 2-4.1-1 (New Source Toxics Control)

Since the Aftermarket Fiberglass Plant has a potential to emit greater than 10 tons per year of any single HAP and 25 tons per year of any combination of HAPs, the requirements of 326 IAC 2-4.1-1 could be applicable. However, because the source has agreed to limit emissions of any single HAP from this facility to less than 10 tons per twelve (12) consecutive month rolling period and any combination of HAPs from this facility to less than 25 tons per twelve (12) consecutive month rolling period, the requirements of 326 IAC 2-4.1-1 (New Source Toxics Control) do not apply.

326 IAC 6-3-2 (Process Operations)

- (a) The particulate matter (PM) emissions from the grinding booth (DC-FG4) in the Aftermarket Fiberglass Plant will be limited to 2.66 pounds per hour when operating at a process weight rate of 1049 pounds per hour. Since potential PM emissions after control by the dry filters are 1.05 pounds per hour, the grinding operations will comply with this rule. Compliance will be demonstrated by operating the dry filters at all times when the grinding is taking place.

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour, and} \\ P = \text{process weight rate in tons per hour.}$$

$$E = 4.10 (0.523 \text{ tons/hr})^{0.67} = 2.66 \text{ pounds per hour.}$$

- (b) The particulate matter (PM) emissions from the welding operations during chassis production in the Roadmaster Plant will be limited to 37.3 pounds per hour when operating at a process weight rate of 54,000 pounds per hour. Since potential PM emissions after control by the electrostatic particulate control devices are 9.26 pounds per hour, the welding operations will comply with this rule. Compliance will be demonstrated by operating the control devices at all times when welding is taking place.

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour, and} \\ P = \text{process weight rate in tons per hour.}$$

$$E = 4.10 (27.0 \text{ tons/hr})^{0.67} = 37.3 \text{ pounds per hour.}$$

- (c) The particulate matter (PM) emissions from the surface coating booths SV-5, SV-6, SV-9, SV-10, SV-11, SV-30, SV-31, SV-32, SV-33, SV-34, SV-35, SV-37 and SV-38 will each be limited by the following:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour, and} \\ P = \text{process weight rate in tons per hour.}$$

Compliance will be demonstrated by operating the dry filters at all times when the gelcoat booth, lamination booth and mold preparation and final finish area are in operation.

326 IAC 8-1-6 (New facilities; General reduction requirements)

- (a) Because the gelcoat and resin operations in the Aftermarket Fiberglass Plant have the potential to emit more than 25 tons per year of VOC, 326 IAC 8-1-6, Best Available Control Technology (BACT) could be applicable. Since the applicant has requested that VOC emissions from this facility be limited to less than 25 tons per twelve (12) consecutive month rolling period, the requirements of 326 IAC 8-1-6 do not apply.

326 IAC 8-2-9 (Miscellaneous Metal Coating)

- (a) The following operations in the modification involve application of coatings to metal substrates:
- Plant 4 - Service Paint, black Roma paint, aerosol can
 - Plant 5 - Component Parts Painting, all coatings
 - Plant 8 - Customer Service, gloss black coating, Broma enamel, rubberized undercoating
 - Roadmaster Plant - All chassis painting
- (b) Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of coating delivered to the applicator at these facilities shall be limited to 3.5 pounds of VOCs per gallon of coating less water, for extreme performance coatings.
- (c) Solvent sprayed from application equipment during cleanup or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.
- (d) Based on the MSDS submitted by the source and calculations made, these operations are in compliance with this requirement.

Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAM, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance require-

ments are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this source are as follows:

- (a) The surface coating and grinding booths at Plants 4, 5, and 8, the Roadmaster Chassis Plant and the Aftermarket Fiberglass Plant have applicable compliance monitoring conditions as specified below:
 - (1) Daily inspections shall be performed to verify the placement, integrity and particle loading of the filters. To monitor the performance of the dry filters, weekly observations shall be made of the overspray while one or more of the booths are in operation.
 - (2) Monthly inspections shall be performed of the coating emissions from the stack and the presence of overspray on the rooftops and the nearby ground. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when an overspray emission, evidence of overspray emission, or other abnormal emission is observed.
 - (3) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

These monitoring conditions are necessary because the dry filters for the surface coating operations must operate properly to ensure compliance with 326 IAC 6-3 (Process Operations).

Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of the 188 hazardous air pollutants (HAPs) set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Management (OAM) Part 70 Application Form GSD-08.

- (a) This source will emit levels of air toxics greater than those that constitute major source applicability according to Section 112 of the 1990 Clean Air Act Amendments.
- (b) See Appendix A, pages 2, 4, 6, 8, 10, 11 and 12 of 12 of this document for detailed air toxic calculations.

Conclusion

The construction and operation of this recreational vehicle and towables manufacturing plant shall be subject to the conditions of the attached proposed Significant Source Modification No. SSM 039-11468-00182.

Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations - Plant 4, Service Paint

Company Name: Monaco Coach Corporation
Address City IN Zip: 1722 Mishawaka Road, Elkhart, Indiana 46513-0313
SSM: 039-11468
Plt ID: 039-00182
Reviewer: Patrick Brennan/MES
Date: November 15, 1999

Material	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	PM Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency
SERVICE PAINT:																
BC BASES & COLORS	8.50	70.00%	0.00%	70.00%	0.00%	30.00%	1.00	1.00	5.95	5.95	5.95	142.80	26.06	2.79	19.83	75%
DIAMOND PRIMER	12.50	33.28%	0.00%	33.28%	0.00%	66.72%	0.01	1.00	4.16	4.16	0.02	0.50	0.09	0.05	6.24	75%
SYSTEM 88 MEDIUM HARDENER	8.01	65.92%	0.00%	65.92%	0.00%	34.08%	0.00	1.00	5.28	5.28	0.01	0.25	0.05	0.01	15.49	75%
SYSTEM 88 COLOR-IT PRIMER	12.69	34.52%	0.00%	34.52%	0.00%	65.48%	0.50	1.00	4.38	4.38	2.19	52.57	9.59	4.55	6.69	75%
DIAMOND HS HARDENER	8.27	58.65%	0.00%	58.65%	0.00%	41.35%	0.10	1.00	4.85	4.85	0.49	11.64	2.12	0.37	11.73	75%
ETCHING PRIMER	9.34	57.71%	0.00%	57.71%	0.00%	42.29%	0.10	1.00	5.39	5.39	0.54	12.94	2.36	0.43	12.75	75%
DIAMOND ETCHING ACTIVATOR	6.74	96.44%	0.00%	96.44%	0.00%	3.56%	0.05	1.00	6.50	6.50	0.33	7.80	1.42	0.01	182.59	75%
DIAMOND SPEED DRY CLEAR	7.86	70.00%	0.00%	70.00%	0.00%	30.00%	0.50	1.00	5.50	5.50	2.75	66.02	12.05	1.29	18.34	75%
DIAMOND CLEAR HARDENER	8.36	42.00%	0.00%	42.00%	0.00%	58.00%	0.25	1.00	3.51	3.51	0.88	21.07	3.84	1.33	6.05	75%
DC88 DIAMOND CLEAR	7.81	70.00%	0.00%	70.00%	0.00%	30.00%	0.50	1.00	5.47	5.47	2.73	65.60	11.97	1.28	18.22	75%
TURBO CLEAR	7.92	64.00%	0.00%	64.00%	0.00%	36.00%	0.25	1.00	5.07	5.07	1.27	30.41	5.55	0.78	14.08	75%
HARDENER (FAST)	8.03	63.00%	0.00%	63.00%	0.00%	37.00%	0.10	1.00	5.06	5.06	0.51	12.14	2.22	0.33	13.67	75%
ACRYLIC LACQUER PRIMER & SEALERS	8.06	60.00%	0.00%	60.00%	0.00%	40.00%	0.25	1.00	4.84	4.84	1.21	29.02	5.30	0.88	12.09	75%
DIAMONT - BC100 CLEAR	7.46	63.00%	0.00%	63.00%	0.00%	37.00%	0.10	1.00	4.70	4.70	0.47	11.28	2.06	0.30	12.70	75%
PAINT SPRAY BLACK BROMA	8.21	40.50%	0.00%	40.50%	0.00%	36.50%	0.10	1.00	3.33	3.33	0.33	7.98	1.46	0.53	9.11	75%
UR40 UNIVERSAL LOW TEMP REDUCER	7.40	100.00%	0.00%	100.00%	0.00%	0.00%	0.25	1.00	7.40	7.40	1.85	44.40	8.10	0.00	ERR	75%
UR50 UNIVERSAL MID TEMP REDUCER	7.29	100.00%	0.00%	100.00%	0.00%	0.00%	0.20	1.00	7.29	7.29	1.46	34.99	6.39	0.00	ERR	75%
UR60 UNIVERSAL HIGH TEMP REDUCER	7.55	100.00%	0.00%	100.00%	0.00%	0.00%	0.10	1.00	7.55	7.55	0.76	18.12	3.31	0.00	ERR	75%
809 FISHEYE ELIMINATOR	7.29	94.00%	0.00%	94.00%	0.00%	6.00%	0.00	1.00	6.85	6.85	0.00	0.08	0.02	0.00	114.21	75%
811 CLEAR ADHESION PROMOTER	7.03	96.00%	0.00%	96.00%	0.00%	4.00%	0.04	1.00	6.75	6.75	0.27	6.48	1.18	0.01	168.72	75%
827 CLEAR ALPHA CRYL	7.80	66.00%	0.00%	66.00%	0.00%	34.00%	0.02	1.00	5.15	5.15	0.10	2.47	0.45	0.06	15.14	75%
891 FLEX AGENT	7.30	81.00%	0.00%	81.00%	0.00%	19.00%	0.03	1.00	5.91	5.91	0.18	4.26	0.78	0.05	31.12	75%
DF25 DIAMOND FLEX	8.82	29.00%	0.00%	29.00%	0.00%	71.00%	0.06	1.00	2.56	2.56	0.15	3.68	0.67	0.41	3.60	75%
521-10 RAPID ADDITIVE	7.33	99.00%	0.00%	99.00%	0.00%	1.00%	0.01	1.00	7.26	7.26	0.07	1.74	0.32	0.00	725.67	75%
SRA REDUCER	7.00	100.00%	0.00%	100.00%	0.00%	0.00%	0.10	1.00	7.00	7.00	0.70	16.80	3.07	0.00	ERR	75%
3M NO CLEANUP ROCKER GARD	7.51	62.00%	0.00%	62.00%	0.00%	38.00%	0.03	1.00	4.66	4.66	0.12	2.79	0.51	0.08	12.25	75%
COMPOSITES - SERVICE PAINT																
DDM 9 CLEAR	9.04	26.80%	0.00%	26.80%	0.00%	56.00%	0.05	1.00	2.42	2.42	0.12	2.91	0.53	0.36	4.33	75%
B5504 ACRYL-R PIGMENTED SEAM SEALER	8.23	28.10%	0.00%	28.10%	0.00%	53.80%	0.01	1.00	2.31	2.31	0.03	0.83	0.15	0.10	4.30	75%
UNSATURATED POLYESTER RESIN	9.01	9.20%	0.00%	9.20%	0.00%	58.08%	0.50	1.00	0.83	0.83	0.41	9.95	1.82	4.48	1.43	75%
CORVETTE WHITE GEL-COAT	10.63	21.96%	0.00%	21.96%	0.00%	64.00%	0.20	1.00	2.33	2.33	0.47	11.20	2.04	1.82	3.65	75%
DURAGLAS PUTTY	13.99	3.43%	0.00%	3.43%	0.00%	84.40%	0.02	1.00	0.48	0.48	0.01	0.23	0.04	0.30	0.57	75%
TAC FREE BODYFILLER	10.00	4.22%	0.00%	4.22%	0.00%	80.18%	1.00	1.00	0.42	0.42	0.42	10.13	1.85	10.49	0.53	75%
KAMBI PUTTY	13.00	5.74%	0.00%	5.74%	0.00%	73.90%	0.03	1.00	0.75	0.75	0.02	0.45	0.08	0.34	1.01	75%
DYNASTY WHITE GELCOAT	11.43	19.28%	0.00%	19.28%	0.00%	68.38%	0.20	1.00	2.20	2.20	0.44	10.58	1.93	2.02	3.22	75%
STYPOL 040-4385	9.04	23.90%	0.00%	23.90%	0.00%	60.81%	0.10	1.00	2.16	2.16	0.22	5.19	0.95	0.75	3.55	75%
PATCHING AID RESIN SOLUTION	8.27	14.96%	0.00%	14.96%	0.00%	32.00%	0.04	1.00	1.24	1.24	0.05	1.19	0.22	0.31	3.87	75%
370 POLYESTER FIBERGLAS REPAIR KIT	9.25	8.80%	0.00%	8.80%	0.00%	60.00%	0.01	1.00	0.81	0.81	0.00	0.10	0.02	0.05	1.36	75%
CLEANERS/SOLVENTS																
PURE GRADE LACQUER THINNER	7.00	100.00%	0.00%	100.00%	0.00%	0.00%	1.00	1.00	7.00	7.00	7.00	168.00	30.66	0.00	ERR	100%
SOLVENT ANTI-STAT PREP	6.26	100.00%	0.00%	100.00%	0.00%	0.00%	0.05	1.00	6.26	6.26	0.31	7.51	1.37	0.00	ERR	100%
900 PRE-KLEANO	6.28	100.00%	0.00%	100.00%	0.00%	0.00%	0.25	1.00	6.28	6.28	1.57	37.68	6.88	0.00	ERR	100%
ACETONE	6.56	100.00%	0.00%	100.00%	0.00%	0.00%	1.00	1.00	6.56	6.56	6.56	157.44	28.73	0.00	ERR	100%
SHER-WILL-CLEAN	6.39	100.00%	0.00%	100.00%	0.00%	0.00%	0.25	1.00	6.39	6.39	1.60	38.34	7.00	0.00	ERR	100%
3M PERFECT-IT II RUBBING COMPOUND	8.97	21.00%	0.00%	21.00%	0.00%	79.00%	0.50	1.00	1.88	1.88	0.94	22.60	4.13	0.00	2.38	100%
3M RUBBING COMPOUND	10.66	30.00%	0.00%	30.00%	0.00%	70.00%	0.50	1.00	3.20	3.20	1.60	38.38	7.00	0.00	4.57	100%
HAZARDOUS WASTE (1)	7.41	89.20%	0.00%	89.20%	0.00%	10.80%	0.50	1.00	6.61	6.61	3.30	79.32	14.48	0.00	61.20	100%
Total											50.41	1209.86	220.80	36.55		
VOC Control											0.00					
PM Control											0.90					
Potential Before Controls:													220.80	36.55		
Potential After Controls:													0.00	3.65		

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
Note: For Service Paint Composites (touch up), the weight percent volatiles were adjusted to reflect an emission rate double that from the AP-42 reinforced plastics flashoff factors. This approximates the CFA unified emission factors.
Total = Worst Coating + Sum of all solvents used

Appendix A: Emission Calculations

HAP Emission Calculations

From Surface Coating Operations - Plant 4, Service Paint

Company Name: Monaco Coach Corporation
 Address City IN Zip: 1722 Mishawaka Road, Elkhart, Indiana 46513-0313
 SSM: 039-11468
 Pit ID: 039-00182
 Reviewer: Patrick Brennan/MES
 Date: November 15, 1999

Material	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % MEK	Weight % Ethyl Benzene	Weight % Styrene	Weight % Toluene	Weight % Xylene	MEK Emissions (ton/yr)	Ethyl Benzene Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Exylene Emissions (ton/yr)
SERVICE PAINT:													
BC BASES & COLORS	8.50	1.000	1.00	0.00%	3.00%	0.00%	0.00%	11.00%	0.00	1.12	0.00	0.00	4.10
DIAMOND PRIMER	12.50	0.005	1.00	0.00%	3.00%	0.00%	1.00%	15.00%	0.00	0.01	0.00	0.00	0.04
SYSTEM 88 MEDIUM HARDENER	8.01	0.002	1.00	0.00%	0.00%	0.00%	0.00%	15.00%	0.00	0.00	0.00	0.00	0.01
SYSTEM 88 COLOR-IT PRIMER	12.69	0.500	1.00	0.00%	3.00%	0.00%	1.00%	7.50%	0.00	0.83	0.00	0.28	2.08
DIAMOND HS HARDENER	8.27	0.100	1.00	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00
ETCHING PRIMER	9.34	0.100	1.00	0.00%	3.00%	0.00%	0.00%	10.00%	0.00	0.12	0.00	0.00	0.41
DIAMOND ETCHING ACTIVATOR	6.74	0.050	1.00	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00
DIAMOND SPEED DRY CLEAR	7.86	0.500	1.00	3.00%	3.00%	0.00%	15.00%	15.00%	0.52	0.52	0.00	2.58	2.58
DIAMOND CLEAR HARDENER	8.36	0.250	1.00	0.00%	0.00%	0.00%	0.00%	10.00%	0.00	0.00	0.00	0.00	0.92
DC88 DIAMOND CLEAR	7.81	0.500	1.00	3.00%	3.00%	0.00%	15.00%	15.00%	0.51	0.51	0.00	2.57	2.57
TURBO CLEAR	7.92	0.250	1.00	3.00%	3.00%	0.00%	20.00%	10.00%	0.26	0.26	0.00	1.73	0.87
HARDENER (FAST)	8.03	0.100	1.00	0.00%	0.00%	0.00%	0.00%	5.50%	0.00	0.00	0.00	0.00	0.19
ACRYLIC LACQUER PRIMER & SEALERS	8.06	0.250	1.00	0.00%	0.00%	0.00%	13.00%	9.00%	0.00	0.00	0.00	1.15	0.79
DIAMONT - BC100 CLEAR	7.46	0.100	1.00	0.00%	3.00%	0.00%	0.00%	15.00%	0.00	0.10	0.00	0.00	0.49
PAINT SPRAY BLACK BROMA	8.21	0.100	1.00	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00
UR40 UNIVERSAL LOW TEMP REDUCER	7.40	0.250	1.00	0.00%	0.00%	0.00%	15.00%	0.00%	0.00	0.00	0.00	1.22	0.00
UR50 UNIVERSAL MID TEMP REDUCER	7.29	0.200	1.00	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00
UR60 UNIVERSAL HIGH TEMP REDUCER	7.55	0.100	1.00	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00
809 FISHEYE ELIMINATOR	7.29	0.001	1.00	0.00%	15.00%	0.00%	0.00%	75.00%	0.00	0.00	0.00	0.00	0.01
811 CLEAR ADHESION PROMOTER	7.03	0.040	1.00	0.00%	2.00%	0.00%	14.00%	8.00%	0.00	0.02	0.00	0.17	0.10
827 CLEAR ALPHA CRYL	7.80	0.020	1.00	12.00%	0.00%	0.00%	38.00%	0.00%	0.08	0.00	0.00	0.26	0.00
891 FLEX AGENT	7.30	0.030	1.00	39.00%	0.00%	0.00%	38.00%	0.00%	0.37	0.00	0.00	0.36	0.00
DF25 DIAMOND FLEX	8.82	0.060	1.00	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00
521-10 RAPID ADDITIVE	7.33	0.010	1.00	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00
SRA REDUCER	7.00	0.100	1.00	0.00%	0.00%	0.00%	40.00%	0.00%	0.00	0.00	0.00	1.23	0.00
3M NO CLEANUP ROCKER GARD	7.51	0.025	1.00	0.00%	2.00%	0.00%	50.00%	5.50%	0.00	0.02	0.00	0.41	0.05
COMPOSITES - SERVICE PAINT													
DDM 9 CLEAR	9.04	0.050	1.00	0.61%	0.00%	0.00%	0.00%	0.00%	0.01	0.00	0.00	0.00	0.00
B5504 ACRYL-R PIGMENTED SEAM SEALER	8.23	0.015	1.00	0.00%	0.00%	0.00%	27.20%	0.00%	0.00	0.00	0.00	0.15	0.00
UNSATURATED POLYESTER RESIN	9.01	0.500	1.00	0.00%	0.00%	0.00%	9.22%	0.00%	0.00	0.00	1.82	0.00	0.00
CORVETTE WHITE GEL-COAT	10.63	0.200	1.00	0.00%	0.00%	19.09%	0.00%	0.00%	0.00	0.00	1.78	0.00	0.00
DURAGLAS PUTTY	13.99	0.020	1.00	0.00%	0.00%	3.85%	0.00%	0.00%	0.00	0.00	0.05	0.00	0.00
TAC FREE BODYFILLER	10.00	1.000	1.00	0.00%	0.00%	3.85%	0.00%	0.00%	0.00	0.00	1.69	0.00	0.00
KAMBI PUTTY	13.00	0.025	1.00	0.00%	0.00%	4.09%	0.31%	1.25%	0.00	0.00	0.06	0.00	0.02
DYNASTY WHITE GELCOAT	11.43	0.200	1.00	0.00%	0.00%	19.10%	0.00%	0.00%	0.00	0.00	1.91	0.00	0.00
STYPOL 040-4385	9.04	0.100	1.00	0.00%	0.00%	23.86%	0.00%	0.00%	0.00	0.00	0.94	0.00	0.00
PATCHING AID RESIN SOLUTION	8.27	0.040	1.00	0.00%	0.00%	15.13%	0.00%	0.00%	0.00	0.00	0.22	0.00	0.00
370 POLYESTER FIBERGLAS REPAIR KIT	9.25	0.005	1.00	0.44%	0.00%	8.25%	0.00%	0.00%	0.00	0.00	0.02	0.00	0.00
CLEANERS/SOLVENTS													
PURE GRADE LACQUER THINNER	7.00	1.000	1.00	10.00%	0.00%	0.00%	60.00%	0.00%	3.07	0.00	0.00	18.40	0.00
SOLVENT ANTI-STAT PREP	6.26	0.050	1.00	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00
900 PRE-KLEANO	6.28	0.250	1.00	0.00%	3.00%	0.00%	3.00%	5.50%	0.00	0.21	0.00	0.21	0.38
ACETONE	6.56	1.000	1.00	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00
SHER-WILL-CLEAN	6.39	0.250	1.00	0.00%	0.00%	0.00%	10.00%	0.00%	0.00	0.00	0.00	0.70	0.00
3M PERFECT-IT II RUBBING COMPOUND	8.97	0.500	1.00	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00
3M RUBBING COMPOUND	10.66	0.500	1.00	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00
HAZARDOUS WASTE (1)	7.41	0.500	1.00	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00

Total State Potential Emissions

4.82

3.72

8.48

31.41

15.60

METHODOLOGY

HAPS emission rate (tons/yr) = Density (lb/gal) * Gal of Material (gal/unit) * Maximum (unit/hr) * Weight % HAP * 8760 hrs/yr * 1 ton/2000 lbs

Note: For Service Paint Composites (touch up), the HAPs weight percentages were adjusted to reflect an emission rate double that from the AP-42 reinforced plastics flashoff factors. This approximates the CFA unified emission factors.

Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations - Plant 5, Component Parts Painting Operations

Company Name: Monaco Coach Corporation
Address City IN Zip: 1722 Mishawaka Road, Elkhart, Indiana 46513-0313
SSM: 039-11468
Pit ID: 039-00182
Reviewer: Patrick Brennan/MES
Date: November 15, 1999

Material	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	PM Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency
PAINTS:																
BLACK ENAMEL	14.63	22.84%	0.00%	22.84%	0.00%	77.16%	0.20	4.00	3.34	3.34	2.67	64.16	11.71	9.89	4.33	75%
HIGH SOLID GLOSS BLACK COATING	6.98	46.38%	0.00%	46.38%	0.00%	35.00%	0.10	4.00	3.24	3.24	1.29	31.08	5.67	1.64	9.25	75%
GLOSS BLACK/WHITE ENAMEL	7.50	88.00%	42.00%	46.00%	0.00%	17.00%	0.02	4.00	3.45	3.45	0.28	6.62	1.21	0.08	20.29	75%
HG BLACK WB	8.93	69.28%	54.00%	15.28%	0.00%	36.00%	0.05	4.00	1.36	1.36	0.27	6.55	1.20	0.60	3.79	75%
V93-900 RUST CONVERTER	11.10	2.30%	0.00%	2.30%	0.00%	97.70%	0.10	4.00	0.26	0.26	0.10	2.45	0.45	4.75	0.26	75%
CLEANERS/SOLVENTS																
SILICONE LUBE-MC43	5.00	94.00%	0.00%	94.00%	0.00%	6.00%	0.01	4.00	4.70	4.70	0.19	4.51	0.82	0.00	78.33	100%
BRAKE CLEANER	12.50	100.00%	0.00%	100.00%	0.00%	0.00%	0.02	4.00	12.50	12.50	1.00	24.00	4.38	0.00	ERR	100%
ALL PURPOSE CLEANER	7.51	12.00%	0.00%	12.00%	0.00%	88.00%	0.10	4.00	0.90	0.90	0.36	8.65	1.58	0.00	1.02	100%

Note: All coatings are applied to metal substrates and subject to 326 IAC 8-2-9.

Total		6.17	148.02	27.01	16.96	
VOC Control	0.00					
PM Control	0.90					
Potential Before Controls:				27.01	16.96	
Potential After Controls:				0.00	1.70	

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)

Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)

Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)

Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)

Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)

Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)

Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)

Total = Worst Coating + Sum of all solvents used

Appendix A: Emission Calculations
HAP Emission Calculations
From Surface Coating Operations - Plant 5, Component Parts Painting Operations

Page 4 of 12, TSD App A

Company Name: Monaco Coach Corporation
Address City IN Zip: 1722 Mishawaka Road, Elkhart, Indiana 46513-0313
SSM: 39-11468
Plt ID: 39-00182
Reviewer: Patrick Brennan/MES
Date: November 1

Material	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % MEK	Weight % Hexane	Weight % Ethyl Benzene	Weight % MIBK	Weight % Toluene	Weight % Xylene	MEK Emissions (ton/yr)	Hexane Emissions (ton/yr)	Ethyl Benzene Emissions (ton/yr)	MIBK Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)
PAINTS:															
BLACK ENAMEL	14.63	0.20	4.00	0.00%	0.00%	1.60%	0.00%	4.33%	7.84%	0.00	0.00	0.82	0.00	2.22	4.02
HIGH SOLID GLOSS BLACK COATING	6.98	0.10	4.00	0.00%	0.00%	5.00%	5.00%	0.00%	10.00%	0.00	0.00	0.61	0.61	0.00	1.22
GLOSS BLACK/WHITE ENAMEL	7.50	0.02	4.00	5.00%	0.00%	0.00%	0.00%	0.00%	7.50%	0.13	0.00	0.00	0.00	0.00	0.20
HG BLACK WB	8.93	0.05	4.00	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
V93-900 RUST CONVERTER	11.10	0.10	4.00	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
CLEANERS/SOLVENTS															
SILICONE LUBE-MC43	5.00	0.01	4.00	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
BRAKE CLEANER	12.50	0.02	4.00	0.00%	75.00%	0.00%	0.00%	0.00%	0.00%	0.00	3.29	0.00	0.00	0.00	0.00
ALL PURPOSE CLEANER	7.51	0.10	4.00	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00

Total State Potential Emissions

0.13 3.29 1.43 0.61 2.22 5.44

METHODOLOGY

HAPS emission rate (tons/yr) = Density (lb/gal) * Gal of Material (gal/unit) * Maximum (unit/hr) * Weight % HAP * 8760 hrs/yr * 1 ton/2000 lbs

Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations - Plant 8, Service Center

Company Name: Monaco Coach Corporation
Address City IN Zip: 1722 Mishawaka Road, Elkhart, Indiana 46513-0313
SSM: 39-11468
Pit ID: 39-00182
Reviewer: Patrick Brennan/MES
Date: November 15, 1999

Material	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	PM Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency
PAINTS:																
HIGH SOLID GLOSS BLACK COATING	6.98	65.00%	17.00%	48.00%	0.00%	35.00%	0.025	2.25	3.35	3.35	0.19	4.52	0.83	0.15	9.57	75%
BROMA 10-MIN DRY ENAMEL-104	7.76	38.00%	0.00%	38.00%	0.00%	62.00%	0.025	2.25	2.95	2.95	0.17	3.98	0.73	0.59	4.76	50%
RUBBERIZED UNDERCOATING - Pitt Penn	8.00	30.00%	0.00%	30.00%	0.00%	35.00%	0.100	2.25	2.40	2.40	0.54	12.96	2.37	2.76	6.86	50%
ADHESIVES:																
BOSTICK SUPERTAK HI PERFORMANCE	7.84	74.00%	0.00%	74.00%	0.00%	19.00%	0.300	2.25	5.80	5.80	3.92	93.99	17.15	3.01	30.53	50%
ADHESIVE SIKAFLEX 221	9.90	9.00%	0.00%	9.00%	0.00%	91.00%	0.015	2.25	0.89	0.89	0.03	0.72	0.13	0.67	0.98	50%
BLACK WEATHERSTRIP ADHESIVE	7.26	52.00%	0.00%	52.00%	0.00%	48.00%	0.010	2.25	3.78	3.78	0.08	2.04	0.37	0.17	7.87	50%
STAYPUT III	6.26	80.00%	0.00%	80.00%	0.00%	20.00%	0.500	2.25	5.01	5.01	5.63	135.22	24.68	3.08	25.04	50%
FSA GEL	9.18	0.50%	0.00%	0.50%	0.00%	99.50%	0.010	2.25	0.05	0.05	0.00	0.02	0.00	0.00	0.05	100%
FSA ADHESIVE	8.30	0.00%	0.00%	0.00%	0.00%	100.00%	0.010	2.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%
SEALANTS/CAULKS:																
ACRYLIC R	8.54	46.00%	0.00%	46.00%	0.00%	54.00%	0.010	2.25	3.93	3.93	0.09	2.12	0.39	0.00	7.27	100%
DAP - ALEX PLUS CAULK (ALL COLORS)	14.40	1.00%	0.00%	1.00%	0.00%	99.00%	0.023	2.25	0.14	0.14	0.01	0.18	0.03	0.00	0.15	100%
SELF-LEVELING ROOF SEALANT	11.40	22.00%	0.00%	22.00%	0.00%	78.00%	0.025	2.25	2.51	2.51	0.14	3.39	0.62	0.00	3.22	100%
BOSTIK SEAL 1100FS SEALANT	10.21	7.90%	0.00%	7.90%	0.00%	92.70%	0.025	2.25	0.81	0.81	0.05	1.09	0.20	0.00	0.87	100%
COLORIMETRIC SILICONE SEALANT MS101	8.66	5.00%	0.00%	5.00%	0.00%	95.00%	0.050	2.25	0.43	0.43	0.05	1.17	0.21	0.00	0.46	100%
EXPANDING FOAM SEALANT	9.18	40.00%	0.00%	40.00%	0.00%	60.00%	0.050	2.25	3.67	3.67	0.41	9.91	1.81	0.00	6.12	100%
SIKAFLEX 250	9.80	2.80%	0.00%	2.80%	0.00%	97.20%	0.010	2.25	0.27	0.27	0.01	0.15	0.03	0.00	0.28	100%
ENERFOAM (ENER 43)	10.00	1.30%	0.00%	1.30%	0.00%	98.70%	0.050	2.25	0.13	0.13	0.01	0.35	0.06	2.43	0.13	50%
CLEANERS/SOLVENTS:																
BD 7-77 PLUS PENETRATING OIL	5.84	99.00%	0.00%	99.00%	0.00%	0.00%	0.020	2.25	5.78	5.78	0.26	6.24	1.14	0.00	NA	100%
BATTERY CLEANER/DEGREASER	10.00	100.00%	0.00%	100.00%	0.00%	0.00%	0.020	2.25	10.00	10.00	0.45	10.80	1.97	0.00	NA	50%
CYCLO WHITE GREASE	6.67	63.00%	0.00%	63.00%	0.00%	0.00%	0.001	2.25	4.20	4.20	0.01	0.23	0.04	0.01	NA	50%
CRAZY CLEAN CLEANER	8.16	11.00%	0.00%	11.00%	0.00%	0.00%	0.250	2.25	0.90	0.90	0.50	12.12	2.21	8.95	NA	50%
AIRCRAFT CLEANER	10.40	92.00%	0.00%	92.00%	0.00%	0.00%	0.020	2.25	9.57	9.57	0.43	10.33	1.89	0.00	NA	100%
PANEL-NU	8.18	11.50%	0.00%	11.50%	0.00%	0.00%	0.200	2.25	0.94	0.94	0.42	10.16	1.85	7.13	NA	50%
OLD ENGLISH POLISHES	7.41	85.00%	0.00%	85.00%	0.00%	0.00%	0.010	2.25	6.30	6.30	0.14	3.40	0.62	0.05	NA	50%
SPRAYWAY GLASS CLEANER	8.10	11.00%	0.00%	11.00%	0.00%	0.00%	0.100	2.25	0.89	0.89	0.20	4.81	0.88	3.55	NA	50%
WD-40	5.91	75.00%	0.00%	75.00%	0.00%	0.00%	0.030	2.25	4.43	4.43	0.30	7.18	1.31	0.22	NA	50%
MED. STRENGTH THREAD LOCK	9.16	5.00%	0.00%	5.00%	0.00%	0.00%	0.003	2.25	0.46	0.46	0.00	0.06	0.01	0.00	NA	100%
SILICONE LUBE-MC43	5.00	94.00%	0.00%	94.00%	0.00%	0.00%	0.050	2.25	4.70	4.70	0.53	12.69	2.32	0.07	NA	50%
BRAKE CLEANER	12.50	100.00%	0.00%	100.00%	0.00%	0.00%	0.255	2.25	12.50	12.50	7.17	172.13	31.41	0.00	NA	50%
ALL PURPOSE CLEANER	7.51	12.00%	0.00%	12.00%	0.00%	0.00%	0.080	2.25	0.90	0.90	0.16	3.89	0.71	2.61	NA	50%
3M NATURAL CLEANER	7.50	85.00%	0.00%	85.00%	0.00%	0.00%	0.020	2.25	6.37	6.37	0.29	6.88	1.26	0.11	NA	50%
CM-911 CITRUS SOLVENT CLEANER	7.00	0.00%	0.00%	0.00%	0.00%	0.00%	0.100	2.25	0.00	0.00	0.00	0.00	0.00	0.00	NA	100%
C-60 DEGREASER	11.08	100.00%	0.00%	100.00%	0.00%	0.00%	0.030	2.25	11.08	11.08	0.75	17.95	3.28	0.00	NA	50%
ACETONE	6.60	100.00%	0.00%	100.00%	0.00%	0.00%	0.010	2.25	6.60	6.60	0.15	3.56	0.65	0.00	NA	100%
BEATWEEN SPOT REMOVER	8.20	19.00%	0.00%	19.00%	0.00%	0.00%	0.005	2.25	1.56	1.56	0.00	0.42	0.08	0.00	NA	100%
WHITE LUBE GREASE	5.84	60.90%	0.00%	60.90%	0.00%	0.00%	0.010	2.25	3.56	3.56	0.00	1.92	0.35	0.00	NA	100%

Total		23.09	556.59	101.58	35.58	
VOC Control	0.00					
PM Control	0.90					
Potential Before Controls:				101.58	35.58	
Potential After Controls:				0.00	3.56	

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)

Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)

Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)

Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)

Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)

Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)

Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)

Total = Worst Coating + Sum of all solvents used

Appendix A: Emission Calculations
HAP Emission Calculations
From Surface Coating Operations - Plant 8, Service Center

Page 6 of 12, TSD App A

Company Name: Monaco Coach Corporation
Address City IN Zip: 1722 Mishawaka Road, Elkhart, Indiana 46513-0313
SSM: 39-11468
Pit ID: 39-00182
Reviewer: Patrick Brennan/MES
Date: November 15, 1999

Material	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Hexane	Weight % Ethyl Benzene	Weight % MEK	Weight % MIBK	Weight % Toluene	Weight % Xylene	Weight % Methanol	Weight % Methylene Chloride	Weight % Glycol Ethers	Hexane Emissions (ton/yr)	Ethyl Benzene Emissions (ton/yr)	MEK Emissions (ton/yr)	MIBK Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Methanol Emissions (ton/yr)	Methylene Chloride Emissions (ton/yr)	Glycol Ethers Emissions (ton/yr)
PAINTS:																					
HIGH SOLID GLOSS BLACK COATING	6.98	0.025	2.25	0.00%	5.00%	0.00%	5.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.09	0.00	0.09	0.00	0.00	0.00	0.00	0.00
BROMA 10-MIN DRY ENAMEL-104	7.76	0.025	2.25	0.00%	0.00%	10.00%	0.00%	8.00%	10.00%	0.00%	0.00%	0.00%	0.00	0.00	0.19	0.00	0.15	0.00	0.00	0.00	0.00
RUBBERIZED UNDERCOATING - Pitt Penn	8.00	0.100	2.25	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00	0.00
ADHESIVES:																					
BOSTICK SUPERTAK HI PERFORMANCE	7.84	0.300	2.25	40.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	9.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ADHESIVE SIKAFLEX 221	9.90	0.015	2.25	0.00%	5.00%	0.00%	0.00%	0.00%	3.00%	0.00%	0.00%	0.00%	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BLACK WEATHERSTRIP ADHESIVE	7.26	0.010	2.25	15.00%	0.00%	20.00%	0.00%	20.00%	0.00%	0.00%	0.00%	0.00%	0.11	0.00	0.14	0.00	0.14	0.00	0.00	0.00	0.00
STAYPUT III	6.26	0.500	2.25	15.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FSA GEL	9.18	0.010	2.25	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FSA ADHESIVE	8.30	0.010	2.25	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SEALANTS/CAULKS:																					
ACRYLIC R	8.54	0.010	2.25	0.00%	0.00%	0.00%	0.00%	4.60%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00
DAP - ALEX PLUS CAULK (ALL COLORS)	14.40	0.023	2.25	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SELF-LEVELING ROOF SEALANT	11.40	0.025	2.25	0.00%	0.00%	0.00%	0.00%	15.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.42	0.00	0.00	0.00	0.00
BOSTIK SEAL 1100FS SEALANT	10.21	0.025	2.25	0.00%	1.40%	0.00%	0.00%	0.00%	6.50%	0.00%	0.00%	0.00%	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COLORIMETRIC SILICONE SEALANT MS101	8.66	0.050	2.25	0.00%	4.50%	0.00%	0.00%	0.00%	23.00%	0.00%	0.00%	0.00%	0.00	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EXPANDING FOAM SEALANT	9.18	0.050	2.25	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SIKAFLEX 250	9.80	0.010	2.25	0.00%	0.00%	0.00%	0.00%	0.00%	2.80%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ENERFOAM (ENER 43)	10.00	0.050	2.25	0.00%	0.00%	0.00%	0.00%	25.00%	20.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	1.23	0.00	0.00	0.00	0.00
CLEANERS/SOLVENTS:																					
BD 7-77 PLUS PENETRATING OIL	5.84	0.020	2.25	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BATTERY CLEANER/DEGREASER	10.00	0.020	2.25	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	40.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.79
CYCLO WHITE GREASE	6.67	0.001	2.25	37.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CRAZY CLEAN CLEANER	8.16	0.250	2.25	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.01
AIRCRAFT CLEANER	10.40	0.020	2.25	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	85.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.74	0.00
PANEL-NU	8.18	0.200	2.25	0.00%	0.00%	0.00%	0.00%	10.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	1.61	0.00	0.00	0.00	0.00
OLD ENGLISH POLISHES	7.41	0.010	2.25	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SPRAYWAY GLASS CLEANER	8.10	0.100	2.25	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WD-40	5.91	0.030	2.25	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MED. STRENGTH THREAD LOCK	9.16	0.003	2.25	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SILICONE LUBE-MC43	5.00	0.050	2.25	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BRAKE CLEANER	12.50	0.255	2.25	75.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	23.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ALL PURPOSE CLEANER	7.51	0.080	2.25	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3M NATURAL CLEANER	7.50	0.020	2.25	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CM-911 CITRUS SOLVENT CLEANER	7.00	0.100	2.25	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C-80 DEGREASER	11.08	0.030	2.25	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ACETONE	6.60	0.010	2.25	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BEATWEEN SPOT REMOVER	8.20	0.005	2.25	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
WHITE LUBE GREASE	5.84	0.010	2.25	40.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Total State Potential Emissions

37.82 0.386 0.334 0.086 3.60 0.00 0.394 2.53 1.05

METHODOLOGY

Total HAPs = 45.15 Tons Per Year

HAPS emission rate (tons/yr) = Density (lb/gal) * Gal of Material (gal/unit) * Maximum (unit/hr) * Weight % HAP * 8760 hrs/yr * 1 ton/2000 lbs

Hapcalc.wk4 9/95

Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations - Roadmaster Chassis Painting

Company Name: Monaco Coach Corporation
Address City IN Zip: 1722 Mishawaka Road, Elkhart, Indiana 46513-0313
SSM: 039-11468
Plt ID: 039-00182
Reviewer: Patrick Brennan/MES
Date: November 15, 1999

Material	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	PM Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency
PAINTS:																
BLACK ENAMEL	14.63	22.84%	0.00%	22.84%	0.00%	77.16%	2.50	4.50	3.34	3.34	37.59	902.20	164.65	139.06	4.33	75%
GLOSS BLACK/WHITE ENAMEL	7.50	83.00%	0.00%	83.00%	0.00%	17.00%	0.25	4.50	6.23	6.23	7.00	168.08	30.67	3.14	36.62	50%
CLEANERS/SOLVENTS:																
WD-40	5.91	75.00%	0.00%	75.00%	0.00%	25.00%	0.01	4.50	4.43	4.43	0.20	4.79	0.87	0.15	17.73	50%
HIGH STRENGTH THREAD LOCK	9.16	5.00%	0.00%	5.00%	0.00%	95.00%	0.01	4.50	0.46	0.46	0.02	0.49	0.09	0.00	0.48	100%
ANTI-SEIZE COMPOUND	10.50	100.00%	100.00%	0.00%	0.00%	100.00%	0.01	4.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50%
SILICONE LUBE-MC43	5.00	94.00%	0.00%	94.00%	0.00%	6.00%	0.10	4.50	4.70	4.70	2.12	50.76	9.26	0.30	78.33	50%
BRAKE CLEANER	12.50	100.00%	0.00%	100.00%	0.00%	0.00%	0.13	4.50	12.50	12.50	7.03	168.75	30.80	0.00	ERR	50%
ALL PURPOSE CLEANER	7.51	12.00%	0.00%	12.00%	0.00%	88.00%	0.01	4.50	0.90	0.90	0.04	0.97	0.18	0.65	1.02	50%
CUTTING OIL	6.66	11.70%	0.00%	11.70%	0.00%	88.30%	0.05	4.50	0.78	0.78	0.18	4.21	0.77	0.00	0.88	100%
WELD WIRE FLEX CLEANER	7.00	86.00%	0.00%	86.00%	0.00%	14.00%	0.10	4.50	6.02	6.02	2.71	65.02	11.87	0.97	43.00	50%
DEGREASER	8.34	72.00%	0.00%	72.00%	0.00%	28.00%	0.02	4.50	6.00	6.00	0.54	12.97	2.37	0.46	21.45	50%
											Total		57.43	1378.24	251.53	144.72
											VOC Control	0.00				
											PM Control	0.90				
											Potential Before Controls:			251.53	144.72	
											Potential After Controls:			0.00	14.47	

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
Total = Worst Coating + Sum of all solvents used

Appendix A: Emission Calculations
HAP Emission Calculations
From Surface Coating Operations - Roadmaster Chassis Painting

Page 8 of 12, TSD App A

Company Name: Monaco Coach Corporation
Address City IN Zip: 1722 Mishawaka Road, Elkhart, Indiana 46513-0313
SSM: 039-11468
Plt ID: 039-00182
Reviewer: Patrick Brennan/MES
Date: November 15, 1999

Material	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % MEK	Weight % Hexane	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % MIBK	Weight % Toluene	Weight % Xylene	MEK Emissions (ton/yr)	Hexane Emissions (ton/yr)	Ethyl Benzene Emissions (ton/yr)	Glycol Ethers Emissions (ton/yr)	MIBK Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)
<i>PAINTS:</i>																	
BLACK ENAMEL	14.63	2.50	4.50	0.00%	0.00%	1.60%	0.00%	0.00%	4.33%	7.84%	0.00	0.00	11.53	0.00	0.00	31.21	56.52
GLOSS BLACK/WHITE ENAMEL	7.50	0.25	4.50	5.00%	0.00%	0.00%	0.00%	0.00%	0.00%	7.50%	1.85	0.00	0.00	0.00	0.00	0.00	2.77
<i>CLEANERS/SOLVENTS:</i>																	
WD-40	5.91	0.01	4.50	0.00%	0.00%	0.00%	2.60%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.03	0.00	0.00	0.00
HIGH STRENGTH THREAD LOCK	9.16	0.01	4.50	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ANTI-SEIZE COMPOUND	10.50	0.01	4.50	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SILICONE LUBE-MC43	5.00	0.10	4.50	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BRAKE CLEANER	12.50	0.13	4.50	0.00%	75.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	23.10	0.00	0.00	0.00	0.00	0.00
ALL PURPOSE CLEANER	7.51	0.01	4.50	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CUTTING OIL	6.66	0.05	4.50	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WELD WIRE FLEX CLEANER	7.00	0.10	4.50	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DEGREASER	8.34	0.02	4.50	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Total State Potential Emissions

1.85 23.10 11.53 0.03 0.00 31.21 59.29

METHODOLOGY

HAPS emission rate (tons/yr) = Density (lb/gal) * Gal of Material (gal/unit) * Maximum (unit/hr) * Weight % HAP * 8760 hrs/yr * 1 ton/2000 lbs

Hapcalc.wk4 9/95

Reinforced Plastics and Composites - Aftermarket Fiberglass (Old Bullmoose Tool Shop)

Company Name: Monaco Coach Corporation
Address City IN Zip: 1722 Mishawaka Road, Elkhart, Indiana 46513-0313
SSM: 039-11468
Plt ID: 039-00082
Reviewer: Patrick Brennan/MES
Date: November 15, 1999

Material	Density (lb/gal)	Weight % Monomer Organics	CFA Unified Emission Factor (lbs/ton)	Gallons per unit	Units per hour	Pounds VOC per hour	Pounds VOC per day	Tons of VOC per year	PM tons per year	Transfer Efficiency
Resins/Gel										
CATALYST 30 CLEAR	9.04	44.00%	0.00	0.332	1.00	0.00	0.00	0.00	1.84	75.00%
CATALYST LUPERSOL DDM-9	9.04	44.00%	0.00	0.028	1.00	0.00	0.00	0.00	0.16	75.00%
GELCOAT COLONIAL WHITE	8.59	35.00%	336.00	3.490	1.00	5.04	120.88	22.06	21.34	75.00%
GELCOAT PATCH BOOSTER	8.27	37.00%	377.00	0.060	1.00	0.09	2.24	0.41	0.34	75.00%
GELCOAT LUND FLEX WHITE PRIMER	11.81	37.00%	377.00	0.009	1.00	0.02	0.45	0.08	0.07	75.00%
MARKING FLUID DYKEM BLUE	7.01	31.00%	0.00	0.001	1.00	0.00	0.00	0.00	0.00	75.00%
RESIN spray application	9.63	35.00%	140.00	0.779	1.00	0.52	12.60	2.30	2.46	75.00%
RESIN flow coat application	9.63	35.00%	77.00	10.380	1.00	3.85	92.36	16.86	71.15	75.00%
		Weight %								
Solvents/Cleaners/Release Agents		Organics								
ACETONE HI-MOISTURE	6.60	0.00%	NA	0.530	1.00	0.00	0.00	0.00	0.00	100.00%
ACETONE WASTE	7.50	0.00%	NA	0.100	1.00	0.00	0.00	0.00	0.00	100.00%
CONDITIONER ACROLAC 5 GAL PAIL	11.00	100.00%	NA	0.014	1.00	0.15	3.59	0.66	0.00	100.00%
CLEANER MOLD PREP	7.05	100.00%	NA	0.014	1.00	0.10	2.40	0.44	0.00	50.00%
RELEASE	7.30	98.00%	NA	0.001	1.00	0.01	0.24	0.04	0.00	50.00%
TR 112 GREEN EDGE WAX	6.40	85.00%	NA	0.039	1.00	0.21	5.10	0.93	0.00	100.00%
TR 301 GLAZE	8.75	33.00%	NA	0.011	1.00	0.03	0.79	0.14	0.00	100.00%
TR 307 FINE FINISH COMPOUND	10.25	35.00%	NA	0.010	1.00	0.04	0.84	0.15	0.00	100.00%
TR 308 FINE FINISH II	9.00	9.00%	NA	0.011	1.00	0.01	0.22	0.04	0.00	100.00%
TR 309 REG RUBBING COMPOUND	10.25	22.00%	NA	0.010	1.00	0.02	0.53	0.10	0.00	100.00%
				Total		10.09	242.26	44.21	97.36	
				VOC Control	0%					
				PM Control	90.0%					
				Potential Before Controls				44.21	97.36	
				Potential After Controls				44.21	9.74	

METHODOLOGY

Potential VOC From Resins/Gel, Pounds per Hour = Density (lb/gal) * Gal of Material (gal/unit) * Maximum (unit/hr) * Emission factor (lb/ton)*(1 ton/2000 lbs)

Potential VOC From Resins/Gel, Pounds per Day = Density (lb/gal) * Gal of Material (gal/unit) * Maximum (unit/hr) * (24 hrs / 1 day) * Emission factor(lb/ton)*(1 ton/2000 lbs)

Potential VOC From Resins/Gel, Tons per Year = Density (lb/gal)* Gal of Material (gal/unit) * Maximum (unit/hr) * (8760 hr/yr) * (1 ton / 2000 lbs) * Emission factor(lb/ton)*(1 ton/2000lbs)

Potential VOC From Solvents, Pounds per Hour =Density (lb/gal)*(Weight % Organics)*Gal of Material (gal/unit) * Maximum (unit/hr)

Potential VOC From Solvents, Pounds per Day =Density (lb/gal) *(Weight % Organics)* Gal of Material (gal/unit) * Maximum (unit/hr) * (24 hrs / 1 day)

Potential VOC From Solvents, Tons per Year = Density (lb/gal)*(Weight % Organics)* Gal of Material (gal/unit) * Maximum (unit/hr) * (8760 hr/yr) * (1 ton / 2000 lbs)

Emission Factor (lbs VOC/ton) taken from "Unified Emission Factors for Open Molding of Composites", Composite Fabricators Association (CFA), April 1999

**Appendix A: Emission Calculations
HAP Emission Calculations**

Page 10 of 12, TSD App A

Reinforced Plastics and Composites - Aftermarket Fiberglass (Old Bullmoose Tool Shop)

**Company Name: Monaco Coach Corporation
Address City IN Zip: 1722 Mishawaka Road, Elkhart, Indiana 46513-0313
SSM: 039-11468
Pit ID: 039-00082
Reviewer: Patrick Brennan/MES
Date: November 15, 1999**

Material	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % MEK	Weight % Styrene	Weight % Toluene	Weight % Xylene	MEK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)
Resins/Gel											
CATALYST 30 CLEAR	9.04	0.332	1.00	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00
CATALYST LUPERSOL DDM-9	9.04	0.028	1.00	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00
GELCOAT COLONIAL WHITE	8.59	3.490	1.00	0.00%	35.00%	0.00%	0.00%	0.00	22.06	0.00	0.00
GELCOAT PATCH BOOSTER	8.27	0.060	1.00	0.00%	37.00%	0.00%	0.00%	0.00	0.41	0.00	0.00
GELCOAT LUND FLEX WHITE PRIMER	11.81	0.009	1.00	0.00%	37.00%	0.00%	0.00%	0.00	0.08	0.00	0.00
MARKING FLUID DYKEM BLUE	7.01	0.001	1.00	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00
RESIN spray application	9.63	0.779	1.00	0.00%	35.00%	0.00%	0.00%	0.00	2.30	0.00	0.00
RESIN flow coat application	9.63	10.380	1.00	0.00%	35.00%	0.00%	0.00%	0.00	16.86	0.00	0.00
Solvents/Cleaners/Release Agents											
ACETONE HI-MOISTURE	6.60	0.530	1.00	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00
ACETONE WASTE	7.50	0.100	1.00	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00
CONDITIONER ACROLAC 5 GAL PAIL	11.00	0.014	1.00	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00
CLEANER MOLD PREP	7.05	0.014	1.00	40.00%	0.00%	60.00%	0.00%	0.18	0.00	0.26	0.00
RELEASE	7.30	0.001	1.00	0.00%	33.00%	0.00%	1.00%	0.00	0.01	0.00	0.0004
TR 112 GREEN EDGE WAX	6.40	0.039	1.00	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00
TR 301 GLAZE	8.75	0.011	1.00	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00
TR 307 FINE FINISH COMPOUND	10.25	0.010	1.00	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00
TR 308 FINE FINISH II	9.00	0.011	1.00	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00
TR 309 REG RUBBING COMPOUND	10.25	0.010	1.00	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00

Total State Potential Emissions

0.18 41.72 0.26 0.00

METHODOLOGY

HAPS emission rate (tons/yr) = Density (lb/gal) * Gal of Material (gal/unit) * Maximum (unit/hr) * Weight % HAP * 8760 hrs/yr * 1 ton/2000 lbs
Styrene emissions from resins and gelcoat are taken directly from the VOC spreadsheet which utilized the CFA Unified Emission Factors.

Appendix A: Emission Calculations
Grinding Operations
From Aftermarket Fiberglass Operations (Old Buill Moose Tool Shop)

Company Name: Monaco Coach Corporation
Address City IN Zip: 1722 Mishawaka Road, Elkhart, Indiana 46513-0313
MSOP: 039-11468
Plt ID: 039-00182
Reviewer: Patrick Brennan/MES
Date: November 15, 1999

Control Efficiency*

90.0%

Emission Rates at the new source.

Facility	Potential Process weight rate (lbs/hr)			Emission Factor (lbs PM /lb grinded)	PM Emission Rate before Controls (lbs/hr)	PM Emission Rate before Controls (tons/yr)	PM Emission Rate after Controls (lb/hr)	PM Emission Rate after Controls (tons/yr)
Grinding Booth 1	1046			0.0100	10.46	45.8	1.046	4.581
Total	1046				10.46	45.8	1.046	4.581

*The control efficiency listed is the efficiency of a dry filter.

Methodology

Emission Factor in lbs of PM/ lbs grinded supplied by applicant and determined to be acceptable by OAM.

Emission Rate at new source before controls in lbs/hr = process weight rate (lbs/hr) * Emission Factor (lbs of PM /lb grinded)

Emission Rate in lbs/hr (after controls) = Emission Rate (before controls) * (1-control efficiency)

Emission Rate in tons/yr = (lbs/hr) (8760 hr/yr) (ton/2000 lb)

Allowable Rate of Emissions

Facility	Process Weight Rate (lbs/hr)	Process Weight Rate (tons/hr)	Allowable Emissions (lbs/hr)	Maximum Allowable Emissions (tons/yr)
Grinding Booth 1	1046	0.523	2.66	11.6

Methodology

Allowable Emissions = $4.10(\text{Process Weight Rate})^{0.67}$

**Appendix A: Welding and Thermal Cutting
Roadmaster Chassis Production (Old Bull Moose Plant)**

Page 12 of 12 TSD, App A

**Company Name: Monaco Coach Corporation
Address City IN Zip: 1722 Mishawaka Road, Elkhart, Indiana 46513-0313
Permit No./Plt ID: 039-11468-00182
Reviewer: Patrick Brennan/MES
Date: November 15, 1999**

PROCESS	Number of Stations	Max. electrode consumption per station (lbs/hr)		EMISSION FACTORS * (lb pollutant / lb electrode)				EMISSIONS (lb/hr)				TOTAL HAPS (lb/hr)
				PM = PM10	Mn	Ni	Cr	PM = PM10	Mn	Ni	Cr	
WELDING												
Submerged Arc (E7018)	68	5		0.0184	0.0103	0.00002	0.00006	6.256	3.502	0.007	0.0204	3.529
Stick (E7018 electrode)	2	1		0.0184	0.00945	0.00002	0.00004	0.037	0.0189	0.000	0.00008	0.019
Tungsten Inert Gas (TIG)(carbon steel)	2	5		0.0055				0.055	0	0.000	0	0.000
FLAME CUTTING	Number of Stations	Max. Metal Thickness Cut (in.)	Max. Metal Cutting Rate (in./minute)	EMISSION FACTORS (lb pollutant/1,000 inches cut, 1" thick)				EMISSIONS (lbs/hr)				TOTAL HAPS (lb/hr)
				PM = PM10	Mn	Ni	Cr	PM = PM10	Mn	Ni	Cr	
Oxyacetylene	10	0.5	250	0.1622	0.0005	0.0001	0.0003	12.165	0.001	0.000	0.000	0.001
EMISSION TOTALS								PM = PM10	Mn	Ni	Cr	Total HAPs
Potential Emissions lbs/hr								18.51	3.52	0.007	0.020	3.55
Potential Emissions lbs/day								444.31	84.52	0.164	0.492	85.17
Potential Emissions tons/year								81.09	15.42	0.030	0.090	15.54
Potential Emissions tons/year after controls (smog hogs with 50% efficiency)								40.54	7.71	0.015	0.045	7.77

METHODOLGY

*Emission Factors are default values for carbon steel unless a specific electrode type is noted in the Process column. Consult AP-42 or other reference for different electrode types.

Welding emissions, lb/hr: (# of stations)(max. lbs of electrode used/hr/station)(emission factor, lb. pollutant/lb. of electrode used)

Cutting emissions, lb/hr: (# of stations)(max. metal thickness, in.)(max. cutting rate, in./min.)(60 min./hr.)(emission factor, lb. pollutant/1,000 in. cut, 1" thick)

Emissions, lbs/day = emissions, lbs/hr x 24 hrs/day

Emissions, tons/yr = emissions, lb/hr x 8,760 hrs/day x 1 ton/2,000 lbs.

Plasma cutting emission factors are from the American Welding Society study published in Sweden (March 1994).

Welding and other flame cutting emission factors are from an internal training session document.

See AP-42, Chapter 12.19 for additional emission factors for welding.

welding.wk4 11/98

Allowable Rate of Emissions

Facility		Process Weight Rate (lbs/hr)	Process Weight Rate (tons/hr)	Allowable Emissions (lbs/hr)	Maximum Allowable Emissions (tons/yr)
Roadmaster Chassis		54000	27	37.31	163.41

Methodology

Allowable Emissions = 4.10(Process Weight Rate)^{0.67}